Department of Finance Canada | Ministère des Finances Canada

MEMORANDUM NOTE DE SERVICE

Security classification Classification de sécurité
SECRET
Originator/Telephone number Auteur/Numéro de téléphone
Jean Lamirande
Our file Notre référence
Your file Votre référence
2017FIN465133
Date
NOV 17 2017

TO / À: Minister of Finance

FROM / DE: Paul Rochon

SUBJECT / OBJET: **Budget 2018 – Approach to Gender Budgeting**

For information. To be read before your upcoming briefing with Finance officials on Gender Budgeting.

Issue

This memo takes stock of the Government's gender budgeting efforts since Budget 2017 and outlines a proposed way forward for Budget 2018.

Background

What is Gender Budgeting?

Gender budgeting is an umbrella term for a variety of practices that exist internationally to promote the allocation of government resources in a gender-responsive manner. It usually includes two complementary concepts:

- Incorporating a gender perspective at all levels of the budget process (e.g., Gender-Based Analysis Plus (GBA+); and
- Making changes to revenue and expenditures in order to promote gender equality (i.e. supporting gender equality and diversity through budget decisions).

[redacted]

s.21(1)(a)
s.21(1)(b)

ADM: Nick Leswick (613-369-3346)
AADM: Alison McDermott (613-369-4018)

Canada

Budget 2017's Gender Statement

In the 2016 *Fall Economic Statement*, the Government committed to "*submit Budget 2017, and all future budgets, to more rigorous analysis by completing and publishing a gender-based analysis of budgetary measures*".

Budget 2017's Gender Statement was an important step in this direction, where the Government presented:

- The first ever public assessment of federal budget measures from a gender perspective – raising the profile of GBA+, and reinforcing the Government's commitment to gender equality and inclusiveness; and
- An overview of the landscape around gender equality in Canada today – acknowledging the progress and identifying persistent challenges that should inform policymaking.

The Gender Statement was generally well received by stakeholders. That being said, this was a first step and challenges remained. Analysis presented tended to be *ex post* in nature, with limited impacts on measure design or priority setting. There remained inconsistencies around the quality of GBA+ across measures, and no overarching gender equality objectives were identified as part of Budget 2017.

<u>Developments since Budget 2017</u>

Since Budget 2017, the Department of Finance has worked closely with Status of Women Canada (SWC) and other government partners to meaningfully improve upon this first Gender Statement.

Established a Working Dialogue with Stakeholders and Experts

On June 13, 2017, Finance and SWC organized an **Experts Meeting on Gender Budgeting** with a number of academics and women's organizations to take stock of Budget 2017, and discuss ideas for improving the practice of gender budgeting. This was followed by a number of additional discussions with outside experts. Overall takeaways from these ongoing discussions include the following:

- There is **significant goodwill from stakeholders** across the board, who recognize the Government's efforts to support gender equality and inclusiveness and are eager to contribute.

- The **Gender Statement was well received and should remain a core piece of the budget document** going forward. Future budgets should provide a more systematic analysis of how major investments in the budget impact gender, and better integrate an intersectional lens.

- Most importantly, it is clear that **the Government's efforts will be judged based on substantive results for women – not presentation or process.** The presentation of the budget from a GBA+ perspective and the degree to which such analysis is disclosed is not seen as important as ensuring that resources are effectively being allocated towards greater gender equality and inclusiveness.

Reflecting this input, Finance gender budgeting efforts have focused on two priorities:

- Improving the quality, comprehensiveness, and evidence base (e.g. data quality) of the GBA+ analysis of all proposals being considered in Budget 2018; and
- Making gender and diversity issues a priority within budget decision-making.

s.69(1)(g) re: (d)

s.69(1)(g) re: (e)

Strengthened Requirements for GBA+ in Budget Proposals

[redacted]

Within Finance, internal processes have been reviewed and strengthened in order to fully integrate GBA+ within the department's analysis and recommendations. This has included additional tools and training for staff who are preparing budget proposals and/or playing a challenge function on proposals developed by other departments. We are systematically tracking GBA+ information related to individual proposals, including the completeness of GBA+, the types of impacts identified, and links to broader gender equality objectives. This is intended both to support decision-making, and the development of the next Gender Statement.

[redacted]

s.21(1)(a)

s.21(1)(b)

s.21(1)(a)
s.21(1)(b)

[redacted]

s.69(1)(g) re: (d)
s.69(1)(g) re: (e)

[redacted]

The OECD Gender Governance Review of Canada

Following Budget 2017, there was a great deal of interest from international organizations around the Government of Canada's work, particularly the OECD which is increasingly focused on gender budgeting and international best practices. This led to multiple discussions on how Canada could work with the OECD to both improve its own processes and contribute to international knowledge-sharing.

The result was the launch of the **Gender Governance Review of Canada** in July 2017, a 12-month review of the federal government's institutional processes and practices related to GBA+ and gender budgeting. In October 2017, we hosted the OECD to a week-long fact-finding mission in Ottawa, engaging with central agencies, select government departments, Parliamentary oversight bodies and external stakeholders.

Ongoing dialogue with the OECD is informing our approach to Budget 2018, and a final report to be released in summer 2018 will provide analysis and recommendations tailored to the Canadian context. Preliminary feedback following the fact-finding mission helped validate the importance of a framework of objectives and indicators to inform budget decision-making, complemented by strong GBA+ across budget proposals as foundational elements of a mature gender budgeting process.

Finance continues to work collaboratively with stakeholders as we prepare for Budget 2018. Planned Pre-Budget Consultations on gender equality represent a key opportunity to engage Canadians more broadly on these issues, particularly on potential policy solutions.

Page 5

is withheld pursuant to sections

est retenue en vertu des articles

69(1)(g) re: (d), 69(1)(g) re: (e)

of the Access to Information Act

de la Loi sur l’accès à l’information

Next Steps

[redacted]

[redacted] s.21(1)(a) s.21(1)(b) s.69(1)(g) re: (d)

[redacted] s.69(1)(g) re: (e)

[redacted]

Page 7

is withheld pursuant to sections

est retenue en vertu des articles

21(1)(a), 21(1)(b)

of the Access to Information Act

de la Loi sur l’accès à l’information

Page 8

is withheld pursuant to sections

est retenue en vertu des articles

69(1)(g) re: (d), 69(1)(g) re: (e)

of the Access to Information Act

de la Loi sur l'accès à l'information

Page 9

is withheld pursuant to sections

est retenue en vertu des articles

21(1)(a), 21(1)(b), 69(1)(g) re: (d), 69(1)(g) re: (e)

of the Access to Information Act

de la Loi sur l’accès à l’information

Pages 10 to / à 11

are withheld pursuant to section

sont retenues en vertu de l'article

69(1)(d)

of the Access to Information Act

de la Loi sur l’accès à l’information

Page 12

is withheld pursuant to sections

est retenue en vertu des articles

21(1)(a), 21(1)(b), 69(1)(g) re: (d), 69(1)(g) re: (e)

of the Access to Information Act

de la Loi sur l’accès à l’information

Department of Finance Canada | Ministère des Finances Canada

For Signature by / Information of À signer par / Pour l'information de Minister of Finance	
Prepared by (name/initials/division) Préparé par (nom/initiales/division) Jean Lamirande	
In consultation with (name/initials/branch(es)/division(s)) En consultation avec (nom/initiales/direction(s)/division(s))	
Approved by	Approuvé par
Director Directrice / Directeur	Thomas Larouche
Director General Directrice générale /Directeur général	Brad Recker
Associate Assistant Deputy Minister Sous-ministre adjoint Délégué	Alison McDermott
Assistant Deputy Minister Sous-ministre adjoint	Nick Leswick
Associate Deputy Minister & G7 Deputy for Canada Sous-ministre délégué et représentant du Canada au G7	Rob Stewart
Associate Deputy Minister Sous-ministre déléguée	
Deputy Minister Sous-ministre	Paul Rochon
Remarks Remarques:	
SUBJECT / OBJET: **Budget 2018 – Approach to Gender Budgeting**	
File no. No de dossier 2017FIN465133	Date NOV 15 2017

Associate Deputy Minister & G7 Deputy for Canada Sous-ministre délégué et représentant du Canada au G7	**(Sign on behalf of DM) (Signer au nom du SM)**	☐
Associate Deputy Minister Sous-ministre déléguée	**(Sign on behalf of DM) (Signer au nom du SM)**	☐
Assistant Deputy Minister Sous-ministre adjoint(e)	**(Sign on behalf of DM) (Signer au nom du SM)**	☐

Department of Finance Canada | Ministère des Finances Canada

MEMORANDUM NOTE DE SERVICE

Security classification Classification de sécurité
SECRET

Originator/Telephone number Auteur/Numéro de téléphone
Mitch Villeneuve

Our file Notre référence
[redacted]

s.16(2)(c)

Your file Votre référence
2017FIN465905

Date
NOV 30 2017

Memo to the Minister or Minister's Staff

Min's Office .... Orig. + 6
DMO 4
Assoc. DM & G7 Deputy .. 1
EFP .... e-copy
C&C .... e-copy
LAW .... e-copy

TO / À: Minister of Finance

FROM / DE: for Paul Rochon

SUBJECT / OBJET: **December 1, 2017 meeting with the Advisory Council on Economic Growth**

For information. This should be read before your meeting with the Advisory Council on Economic Growth on December 1st.

Overview

You are scheduled to attend a meeting with the Advisory Council on Economic Growth between 3:00 p.m. and 6:00 p.m. on December 1, 2017 at 90 Elgin.

At this meeting, the Council will present and discuss with you its third and final report, which includes recommendations on enabling greater business investment and greater investments in skills developments for working Canadians. There is also time allotted to discuss the future of the Council. After the formal portion of the meeting, there will be a short reception. Attending the meeting will be most Council members (with a couple joining by teleconference), Jeffrey Trossman from Blakes (who assisted the Council with its recommendation related to the tax system), and a number of employees from McKinsey and the Department of Finance.

Annex A – Meeting Agenda

Annex B – Potential Speaking Points

Annex C – *The Path to Prosperity: Resetting Canada's Growth Trajectory*

Annex D – *Investing in a Resilient Canadian Economy*

Annex E – *Learning Nation: Equipping Canada's Workforce with Skills for the Future*

Annex F – *Ideas into Action: A Review of Progress Made on the Recommendations of the Advisory Council on Economic Growth*

ADM: Nick Leswick (369-3346)
AADM: Alison McDermott (369-4018)

Canada

Third Wave of Recommendations

The final versions of the third set of Council reports are attached. The recommendations are similar to those in the drafts we provided to you earlier this month (2017FIN464740), though the text has been substantively edited and shortened.

Below is a summary of the Council's recommendations. The full chapters can be found in Annexes C to F. In Annex B, you will find potential speaking points for the meeting.

The Path to Prosperity: Resetting Canada's Growth Trajectory

The opening chapter recalls the Council's mandate and self-initiated target to raise real median household income by $15,000, as well as provides a discussion of the global economic forces motivating the Council's recommendations, such as the quickening pace of technological change and population aging.

Investing in a Resilient Canadian Economy

Regulatory policy

The report notes that while Canada does well in international rankings of regulatory processes and governance, changes are needed in how Canada designs and administer regulations in many sectors. The Council proposes to convene an Expert Panel on Regulatory Agility and Innovation to:

- Catalyze innovation across the economy;
- Drive coordination between regulatory bodies and jurisdictions; and
- Promote efficient and predictable regulation.

More specifically, the proposed Panel would oversee a wide-ranging review of existing regulations and the relevant management processes, as well as undertake a comprehensive assessment of the aggregate regulatory burden shouldered by Canadian businesses.

Tax policy

The Council notes that the global economy has changed considerably since the tax system was last comprehensively reviewed (with intellectual capital and innovation becoming relatively more important, and physical capital becoming relatively less important) and that competition for global investment dollars has never been fiercer, making it important to ensure that the tax system continues to enable success in the modern economy.

Therefore, the Council proposes a targeted review of Canada's tax regime, focused on investment and innovation. This recommendation would see a panel of tax policy experts (academics, economists, and private sector tax specialists) formed to engage in consultations and develop a series of targeted recommendations to modernize Canada's tax system so that it better drives innovation and investment.

The overall objectives of the tax review would be to:

- Foster the development and adoption of innovation in Canada;
- Solidify Canada's position as a global magnet for investment and talent; and
- Bring a customer experience lens to tax administration.

The report includes an acknowledgement of the government's plans to reduce the small-business tax rate and make changes to certain rules relating to Canadian-Controlled Private Corporations: "*Our recommendations do not directly relate to these planned changes. Once these legislative changes have been enacted, we are recommending a targeted review of other aspects of the Canadian tax regime that have a significant influence on business investment decisions...*"

SMEs policy

The report notes that the growth challenges and barriers to investment facing Canadian small and medium enterprises (SMEs) are distinct from larger companies, and generally related to lack of access to capital, limited managerial experience, and higher relative costs due to their small size. The Council identifies three priorities to spur investment and growth within this sector of the economy:

- Expand the most successful SME advisory programs;
- Strengthen export-oriented programs to unlock $20 billion in export potential; and
- Promote the adoption of innovation among SMEs.

<u>Learning Nation: Equipping Canada's Workforce with Skills for the Future</u>

The Council assesses a gap in training to meet future skills needs of $15 billion in annual investments in training for working Canadians, and recommends that the government introduce a comprehensive *Skills Plan for Working Canadians* to transform the existing skills and training landscape – which is currently focused on addressing unemployment by matching workers with presently in-demand skills – to one that encourages lifelong upskilling/reskilling for all workers.

To "provide a starting point for this national discussion," the Council offers two ideas that could compose the central elements of this *Plan*:

- A new, federally-governed Canada Lifelong Learning Fund (CLLF) that helps reduce the financial barriers to continuing training for adults by co-funding investments both employers and individuals make in skills development; and
- The transformation of the government's employment centres into hubs of hands-on career and training guidance not only for the unemployed but also for working adults and employers.

Ideas into Action: A Review of Progress Made on Previous Council Recommendations

The report will end with a chapter on the implementation of measures related to Growth Council recommendations, structured to tell the story of each measure and to mention some of the next steps for these initiatives, providing Council advice in places. For example, "We encourage the government to take the necessary measures for bolstering the Canada's system for social and labour market integration and consider raising immigration levels further in subsequent years."

[redacted]

s.21(1)(a)

s.21(1)(b)

Pages 18 to / à 19

are withheld pursuant to sections

sont retenues en vertu des articles

21(1)(a), 21(1)(b)

of the Access to Information Act

de la Loi sur l’accès à l’information

Annex C – ***The Path to Prosperity: Resetting Canada's Growth Trajectory***

THE PATH TO PROSPERITY:
RESETTING CANADA'S GROWTH TRAJECTORY

ADVISORY COUNCIL ON ECONOMIC GROWTH
December 1, 2017

How can we accelerate the growth of the Canadian economy and improve the prosperity of all Canadians over the coming 10 to 15 years?

That was the question posed by Canada's Minister of Finance when he convened the Advisory Council on Economic Growth in early 2016. The Council's mission is to examine the long-term potential of Canada's economy and, based on its findings, to make recommendations for improving the prospects for inclusive economic growth.

The Council is convinced the formula that drove the past growth of the Canadian economy—and supported steady improvements in our standard of living—is unlikely to be sufficient for the future. Like many other advanced economies, Canada faces the pressure of an aging population, technological disruption to many sectors of the economy, and the rapid shift of global economic power to Asia. Current trends suggest that annual GDP growth in Canada will average only 1.5 percent over the next 50 years—half the rate of the past 50. Left unchecked, the slower pace of growth would have a profound impact on the prosperity of Canadian families and the outlook for them and their children.

This does not have to be the case. Canada's numerous natural advantages, coupled with the opportunities created by a rapidly changing world, offer the potential to stimulate new waves of investment, innovation, and job creation, unlocking a new formula for growth and prosperity. The challenge that the Council set for itself was to identify bold solutions that could jolt the economy, stimulate inclusive growth, and help raise the quality of life for all Canadians, targeting a $15,000 increase in median annual pre-tax household income above current projections by 2030.

This document lays out a third release of Council recommendations for resetting the country's long-term growth trajectory for the benefit of all Canadians.

In October 2016, the Council released its initial findings and its first wave of three recommendations. They included increasing investment in infrastructure, a plan for raising foreign direct investment in Canada, and a set of proposals for attracting the immigrant talent Canada will need to fuel its growth.

In our second wave of five recommendations, released in February 2017, we detailed how Canada can unlock innovation by supporting innovation marketplaces, improving access to growth capital, and embracing a strategic approach to government procurement while also modernizing government innovation programs. Additionally, we recommended that Canada: establish a FutureSkills Lab to study and help develop the new skills that Canadians need; boost private-sector growth by unlocking six to eight high-potential sectors; deepen its trading relationships in Asia and Europe; and stimulate greater workforce participation (particularly among Indigenous peoples, lower-income Canadians, women with young children, and Canadians over the age of 55).

Our third set of recommendations, released today, addresses two additional elements of Canada's growth agenda: business investment, and skills development for working Canadians. We need to modernize Canada's regulatory and tax regimes so they promote more investment and innovation, enabling enterprises to pursue growth opportunities; and we must expand our support for Canada's small and medium-sized enterprises, helping them adopt new technologies and enter new export markets. We also need to ensure that the government,[1] employers, and individuals all dramatically increase their investments in skills development for working Canadians given the expected major disruption that technology will bring to the world of work.

The Changing Drivers of Economic Growth

For decades, growth in most advanced economies, including Canada, has been driven by the accumulation of physical assets, population growth and the concurrent increase in labour force participation (particularly by women and the "baby boom" generation), and advances in technology that have created new industries and improved productivity in older ones. Propelled by these forces, Canada's economy stands in an enviable position today. We have a vibrant democracy, with a tradition of pluralism and diversity. Our economy is strong and fisca ly stable: Canada has abundant natural resources, a highly educated labour force,[2] a trusted business environment, low public debt, and a stable banking sector.

However, the drivers of growth in the world economy are changing. Three principle forces are redefining how economies can succeed in the years ahead:

1. The pace of technological change has accelerated rapidly, reshaping business and the world of work

The pace at which new technologies are developed and adopted has accelerated during the past five to ten years, as has the introduction of new technologies (like self-driving cars), products (such as mass-market drones), applications (like assisted living healthcare applications), and technology-enabled solutions (such as additive manufacturing systems, or robo-advisers in wealth management).[3] Rapid improvements in research and industry tools have also helped shorten development cycles in many sectors, from pharmaceuticals to automobile manufacturing. Much of this has happened very quickly, and the pace of change fueled by technology continues to rise.

- Data and information and communications technology (ICT) are becoming the lifeblood of the global economy, fueling ideas for new products and services, and advancing the transnational flow of trade, capital, and ideas. There are at least three times as many connected devices in the world today as there are people.[4] Meanwhile, the cross-border flow of digital information—searches, transactions, communications—has increased five-fold since 1990.

- The shift in value from physical to digital information goods—already reflected in financial markets—will only increase. Technology is now the largest sector of the world economy, eclipsing even financial services, and includes five of the top 20 public companies by market capitalization.[5] These global phenomena are in full effect in Canada, too.

- Technology is changing the work Canadians do, and where they do it. Already, 43 percent of activities performed by Canadian workers could be automated using available technology.[6] The adoption of

such innovations in work processes is creating new employment opportunities, but these positions require different skills (by some estimates, Canada already has a shortage of 19,000 data and analytics professionals). Jobs requiring low- and medium-level skills are at particular risk of automation.[7]

2. Economic power is shifting from west to east, changing global trade flows

Economic competition, whether for capital, talent, or ideas, is global. And global purchasing power is increasingly concentrated in developing and emerging economies, particularly in Asia and, to some extent, Africa. By 2028, the world may have as many as 2 billion more middle-class consumers—nearly 90 percent of whom will live in Asia—representing an additional $30 trillion in annual spending.[8]

- Over the past 10 years, the world economy has grown by 2.5 percent per annum while the G7 economies are growing at just under one percent.[9] By 2050, six of the seven largest economies in the world will be in emerging markets, with three of top four in Asia.[10]

- During the past decade, trade between emerging economies has doubled as a share of global trade. Trade between China and Africa alone grew from $9 billion in 2000 to $211 billion in 2012. Europe and North America no longer represent the two critical hubs of trade flow. Rather, trade relationships have become more complex and fragmented—with Asia quickly becoming the world's largest trade region.[11]

- By 2025, half of all companies with revenues of $1 billion or more will be headquartered in emerging markets, particularly in Asia. More large companies will be based in China than in the United States or Europe.[12]

- As a relatively small and open economy, Canada depends on international trade to generate growth and prosperity. Trade accounts for 65 percent of our GDP, as opposed to 30 percent in the United States. Therefore, it is imperative that we deepen our trading relationships with emerging economies such as China and India. For Canada to prosper, it must participate in markets that are growing and increasingly significant.

3. The populations of many advanced and emerging economies are aging

The majority of the world's population lives in nations where fertility rates are below replacement rates—in short, these countries' populations are gradually aging.[13] The resulting decline in labour-force participation rate will limit the potential for economic growth, and a rising population of seniors will strain public finances.

- Employment growth was a significant factor in global GDP growth, which expanded six-fold between 1964 and 2014. During this period, the global workforce grew by an average of 1.7 percent annually. However, due to aging, total employment is likely to peak soon and then start declining.[14] The drop in the relative share of working-age adults likely will lead to a decline in income per capita, reducing overall prosperity.

- At the same time, caring for large numbers of the elderly puts severe pressure on government finances. By 2020, more than a billion people around the world will be over the age of 60.[15] Declining growth and the shrinking share of working-age adults will make it harder to support a robust social safety net.

- In Canada, the support ratio—the number of people in prime working age (between 15 to 65 years old) per senior (person aged 65 years or older)—is on a steady downward trajectory. It has declined from 6.6 in the early 1970s to 4.2 in 2012. By 2030, it is projected that there will be only about two working-age adults supporting each senior.[16]

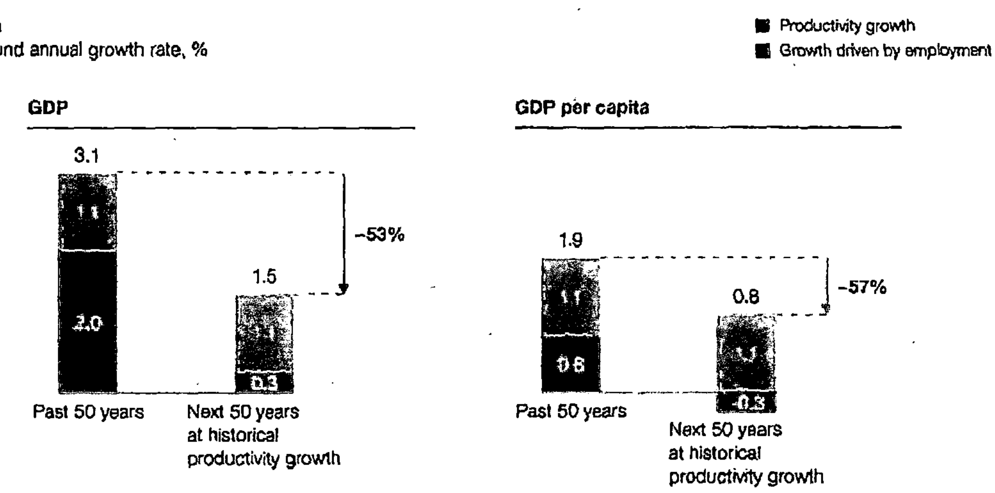
■ ■ ■

The world is going through a period of unprecedented change, which offers many opportunities but also brings significant volatility. Disruptions caused by new digital technologies are leading to quick productivity gains, but they are also making companies increasingly vulnerable to critical cybersecurity breaches. The rapid speed with which capital can move around the world has proven helpful to nations eager to attract foreign investment, but it has also contributed to volatility in markets for nearly every financial asset class. The mobility of talent around the world has stimulated the exchange of ideas, but growing migration and globalization have also given rise to anti-trade and anti-immigrant sentiments in some countries.

Canada must be prepared to navigate this change and volatility. It can no longer rely on the old formula for economic growth, which emphasized investments in machinery and equipment, and population growth. Given our aging population and chronic underperformance in productivity,[17] we estimate that GDP per capita will grow by only 0.8 percent annually over the next 50 years versus 1.9 percent over the past 50 years (see Exhibit 1)—a decline that would limit continuing improvement in living standards. Although these trends

Exhibit 1 **Canada's past and projected GDP growth**

Canada
Compound annual growth rate, %



Note: Numbers may not sum due to rounding.
Source: The Conference Board Total Economy Database; United Nations Population Division

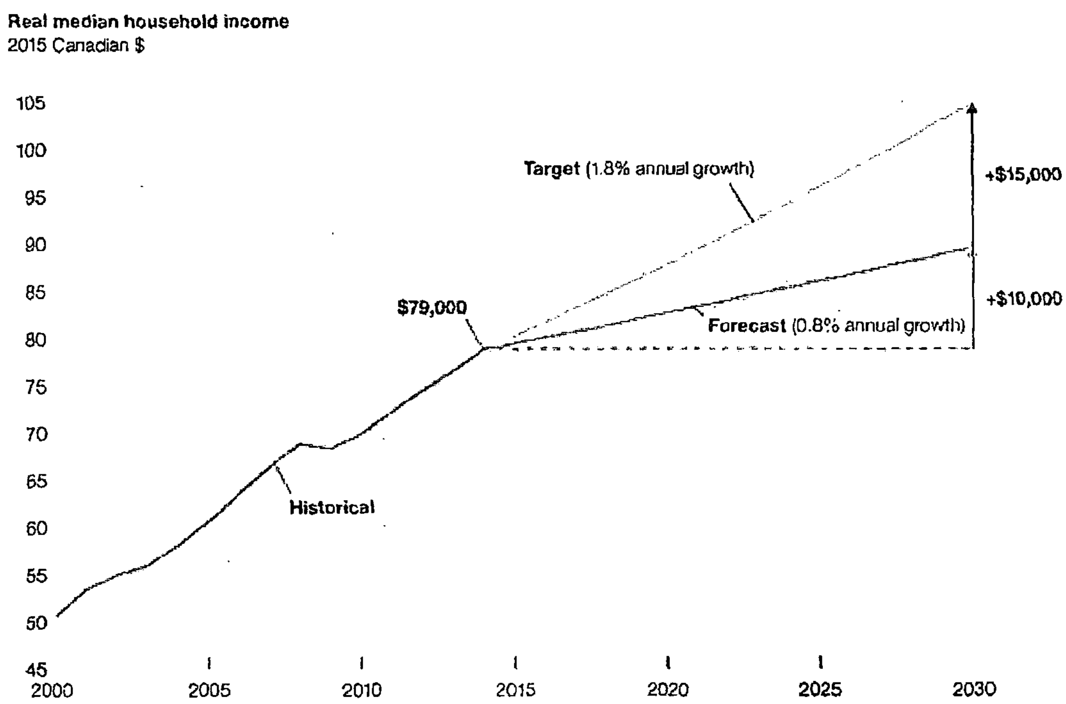
are also at work in other advanced economies, Canada faces the largest potential declines in GDP and GDP-per-capita growth among the world's advanced economies.[18]

A Strategy to Create Prosperity for All Canadians

Changing the course of the Canadian economy over the next 50 years will require a series of bold actions in areas such as infrastructure, foreign direct investment, immigration, and skills training. Successful initiatives would not only restore GDP growth rates to historic levels, but would encourage more inclusive growth, which is crucial to social cohesion.

That is why, when we started our work in 2016, the Council set a goal to raise real, median annual pre-tax household income above the forecasted 2030 baseline. This would mean a boost in total income for the median Canadian household from about \$79,000 in 2014 to roughly \$105,000—considerably above the \$90,000 expected[19] (see Exhibit 2).

Exhibit 1 **The Council's target**



The Council is confident that Canada has the right ingredients to become the most globally connected and innovative country in the world, an engine for propelling Canadian champions onto the global stage, home to a resilient and engaged workforce, a magnet for global talent and capital, and a leader in governance models that mobilize Canada's best capabilities. The Council believes that if our recommendations are implemented in full, Canada can more than realize this aspiration.

Our approach

To date, the Council has released eight recommendations for resetting Canada's growth trajectory. These include:

1. Develop a focused federal infrastructure strategy and establish a Canadian Infrastructure Development Bank;

2. Become a top-tier foreign direct investment (FDI) destination by developing an FDI strategy in line with the country's economic growth strategy, and creating an FDI agency (Invest in Canada Hub) to attract anchor companies;

3. Increase annual permanent economic immigration levels from 300,000 to 450,000 over five years, streamline the entry for top talent (specialized workers and executives, for example), and rethink Express Entry points allocations to qualify more international students;

4. Unlock innovation and support its commercialization by establishing business-led innovation marketplaces (superclusters), creating additional pools of growth capital for promising companies, leveraging strategic government procurement to help innovators identify a "reference customer," reviewing and rationalizing government innovation programs, and expediting entry for top talent;

5. Establish the FutureSkills Lab, a non-governmental organization to study current and future skills demand and serve as a laboratory for skills development and measurement;

6. Unleash growth in six to eight high-potential sectors (for example, agri-food, advanced manufacturing, energy and renewables, and health care and life sciences) by taking a new aspirational and collaborative approach to sector development;

7. Increase workforce participation, in particular among Indigenous peoples, lower-income Canadians, women with children, and Canadians over the age of 55;

8. Position Canada as a global trading hub by strengthening links to large and fast-growing Asian economies, nurturing the North American trade relationship, and investing in trade infrastructure.

The government has quickly put these recommendations under consideration, and has acted on many of them already. For example, it has passed legislation to establish the Canadian Infrastructure Bank, the Invest in Canada Hub and a skills innovation lab; increased the level of permanent economic immigration; launched six business-led Economic Strategy Tables; and shortlisted nine candidates for the new innovation superclusters. Still, Canada must take many more actions in the months ahead. We review what

has been achieved and what remains to be done in a report that we are issuing today along with our third set of recommendations, "Ideas into Action: A Review of Progress Made on the Recommendations of the Advisory Council on Economic Growth."

What Remains to Be Done: Creating a Resilient Economy and Workforce

Two additional issues need to be addressed in Canada's growth agenda, in the critical areas of business investment and workforce skills development. In the future economy, both individuals and enterprises will need the capabilities and flexibility to identify and seize opportunities quickly. In acknowledgement of this, we are releasing recommendations for building economic resilience, and creating a highly skilled, confident, and productive workforce.

Investing in a resilient Canadian economy

Business investment—in everything from machines to software to people—is a core driver of economic growth. However, Canadian companies invest notably less than their global peers, a gap that, in the long term, leads to a reduction in the standard of living of all Canadians.

To drive greater investment, especially in the innovative technologies that will power the economy of the future, we need bold policy changes.

First, we must transform our regulatory system into a catalyst for innovation throughout the economy. We recommend that the government establish an Expert Panel on Regulatory Agility and Innovation that will be responsible for ensuring our regulations keep pace with the creativity of Canadian innovators and entrepreneurs. The panel will also drive better coordination between agencies and jurisdictions, and promote efficient and predictable regulation.

Second, we need to conduct a targeted review of our tax system to ensure that the tax regime fosters the development and adoption of innovation, and secures Canada's position as a global magnet for investment and talent. It is worth noting that it has been decades since the last significant review of Canada's tax system—years before the emergence of mobile phones and the Internet, and the rise of the digital economy.

Third, we need to offer small- and medium-sized enterprises dedicated advisory services so they can effectively pursue the opportunities presented by new technologies and growing export markets.

Equipping Canada's workforce with skills for the future

Canada's current skills development infrastructure is not equipped to manage coming labour-market disruptions. The system today rests primarily on two pillars: the first one supports the development of skills before people enter the workforce, through K-12 and post-secondary education; the second supports individuals when they leave the workforce, by providing assistance to the unemployed and the retired. That leaves a large gap in institutional support and training during Canadians' most productive years, at a time when technological changes are transforming many occupations and affect a wide swath of the working population.

Canada urgently needs a third pillar that focuses on supporting working adults. The Council anticipates that managing the expected labour market turmoil will require an additional $15 billion of annual investments in adult skills development. The magnitude of the coming shifts also necessitates the development of a comprehensive Skills Plan for Working Canadians that will guide Canada's approach to assisting adults in capturing new occupational opportunities. To provide a starting point for this conversation, we offer two concrete proposals:

1. New, federally governed Canada Lifelong Learning Fund that helps reduce the financial barriers to continuing training for adults by co-funding investments by both employers and individuals in skills development;

2. Transformation of the government's employment centres into hubs of hands-on career and training guidance not only for the unemployed but also for working adults and employers who need to navigate the labour market disruption caused by technological change.

Our Aspiration for Canada

The road ahead is hard. Success demands bold, swift action and focused, agile execution over many years. But if we follow the path outlined here together, the tangible goal this Council put forward for Canada almost two years ago—to boost the median household's annual pre-tax income by $15,000 above current projections by 2030—is, we believe, eminently achievable. The Canada Infrastructure Bank, for example, has the potential of delivering $200 billion worth of productivity-enhancing projects over 10 years. We expect these investments alone would boost annual GDP by $40-50 billion and deliver $1,350-$1,700 of the additional increase in median annual pre-tax household income that we have targeted.

Achieving the overall target will require progress across the full suite of our recommendations. And success in the end will be measured, not by numbers alone, but through tangible improvements in the lives of individual Canadians. The artificial intelligence entrepreneur who scales up her 200-person, Montreal start-up with investment from the Canadian Business Growth Fund; the recent immigrant in Waterloo working as a sales representative at a medical devices company that exports to Asian markets expanded by free trade agreements; the former long-haul truck driver who has used a Lifelong Learning Fund grant to become a technician at an autonomous vehicle maintenance centre—these will be the true markers of meaningful progress by 2030.

These stories, and thousands of others like them, will provide the forward-looking narrative for a diverse, ambitious nation that, in little more than a decade, can transform itself into a thriving model of the new knowledge economy, one with a highly skilled and adaptive workforce, a magnet for international talent, a beacon of open trade and investment with unrivaled infrastructure, whose tax and regulatory systems are fit for an era of technological disruption. Above all, by making sustainable and inclusive growth our bedrock, we will leave a legacy for generations to come. ■

[1] Note that throughout the report, we use "the government" to refer to the Government of Canada.

[2] Canada has the second-highest rate of tertiary education attainment among OECD nations and its human capital rates highly on the United Nations Human Development Index. Canada also has high per capita annual production of resources, according to the U.S. Energy Information Administration.

[3] Rita Gunther McGrath, "The pace of Technology Change is Speeding Up," *Harvard Business Review*, November 25, 2013.

[4] Harald Bauer, Mark Patel, and Jan Veira, "The Internet of Things: Sizing Up The Opportunity," McKinsey Insights, December 2014, mckinsey.com.

[5] "Global Top 100 Companies in the World by Market Capitalization," *PwC IPO Centre* March 31 [illegible] Alphabet, Microsoft, Facebook, and Tencent Holdings. Amazon and Alibaba are also among the world's 20 largest, but the report's authors consider them to be to be consumer services companies, not technology ones.

[6] Michael Chui, James Manyika, Mehdi Miremadi, "Where machines could replace humans—and where they can't (yet)," *McKinsey Quarterly*, July 2016. mckinsey.com. Other analysts, including the World Bank, suggest the potential for automation is even higher.

[7] Jaclyn Tersigni, "Big opportunities in big data," *The Star*, March 13, 2017, thestar.com.

[8] Homi Kharas, "The unprecedented expansion of the global middle class," *The Brookings Institution*, February 28, 2017, brookings.edu.

[9] Calculations based on World Bank data available at data.worldbank.org.

[10] Those six economies include China, India, Indonesia, Brazil, Russia, and Mexico; measured by GDP at PPP. "The Long View: How Will the Global Economic Order Change by 2050?" *PwC*, February 2017, pwc.com.

[11] Richard Dobbs, James Manyika, and Jonathan Woetzel, *No Ordinary Disruption: The Four Global Forces Breaking All the Trends* (McKinsey & Company, 2015).

[12] Ibid.

[13] Ibid.

[14] Richard Dobbs, James Manyika, Jonathan Woetzel, et al, "Global Growth: Can Productivity Save the Day in an Aging World?" *McKinsey Global Institute*, January 2015.

[15] "How 21st-Century Longevity Can Create Markets and Drive Economic Growth," *World Economic Forum*, October 5, 2015, weforum.org.

[16] "Dependency ratio," *Statistics Canada*, Accessed on November 16, 2017, statcan.gc.ca.

[17] At 1.1 percent, our productivity growth lags that of other advanced economies such as the United States, Germany, and the United Kingdom.

[18] According to analysis done based on The Conference Board's "Total Economy Database," the United Nations Department of Economic and Social Affairs Population Division, and the International Labour Organization, Canada faces a 53 percent drop in GDP growth from the past 50 years to the next 50 years in a base case scenario—a larger decline than Germany, South Korea, Japan, Austria, Italy, the United States, France, and the United Kingdom.

[19] The forecast assumes 0.8 percent annual growth in median pre-tax household income. The target annual growth rate is 1.8 percent.

Annex D – ***Investing in a Resilient Canadian Economy***

INVESTING IN A RESILIENT CANADIAN ECONOMY

ADVISORY COUNCIL ON ECONOMIC GROWTH
December 1, 2017

Executive summary

To thrive in a rapidly evolving world, Canadian businesses in nearly every industry must enter new markets and develop more innovative products and services. Policy makers must ensure businesses and workers can make the investments necessary to do so. Furthermore, the definition of investment needs to be broadened beyond the traditional categories of structures, machinery and equipment, and intellectual property. Investments in human capital, in data assets, and in the adoption of new technology are increasingly vital drivers of growth and competitiveness.

Supporting higher levels of business investment needs to become a government priority. Investment in Canada's economy has lagged that of the United States and other peer countries, and our productivity has slipped from 90 percent of US levels in 1985 to 78 percent in 2016.[1] Median real wages have grown at a slower pace here than in the United States as well.[2]

The Council recognizes that this is a complex issue. Many of our prior recommendations will generate higher levels of investment—notably, launching innovation initiatives, establishing an Invest in Canada Hub, creating an Infrastructure Bank, and promoting growth in key sectors through the Economic Strategy Tables. But in this report, we go a step further. Building on the substantial work that has been done on this topic by many leading institutions,* we make three additional recommendations to boost investment and Canada's economic resilience:

1. An agile regulatory system that acts as a catalyst for investment and innovation. The regulatory approach of the Government of Canada (hereafter "the government") needs to evolve to better fit an economy where innovation and change are the norm. Regulation has to be agile and adaptive enough to address the ways that innovative companies will continuously rewrite the rules of competition, ensuring sufficient oversight to protect the public interest without posing obstacles to innovation. Ideally, Canada's regulatory environment should act as a catalyst for new products and business models, especially in promising industries such as life sciences, financial technology (fintech), and agri-food. Regulation also must be predictable, efficient, and consistent, so it is not a barrier to business investment, innovation, and ultimately, economic growth. To drive these changes, we recommend establishing a dedicated Expert Panel on Regulatory Agility.

2. A targeted tax review to create incentives for investment. The government must review Canada's tax system to ensure it spurs investment and competitiveness. When the country last conducted such reform decades ago, investments in physical assets were more important and global trade less so than they are today. Our tax system must be updated for the modern economic era— to safeguard Canada's status as a globally competitive tax jurisdiction and to ensure that it incentivizes investments in innovative technologies and intellectual capital. For example, under our current tax system, manufacturing companies are taxed at an effective rate of 8 percent—roughly one-third of the rate applied to the information and

* We thank the many experts who contributed their time and ideas in the creation of this report, and are grateful to have been able to rely upon the insights in the many reports previously published on these topics such as the Canadian Chamber of Commerce's *Ten Ways to Build a Canada That Wins*, the Conference Board of Canada's Canada's *New Trade and Technology Paradigm*, and the C.D. Howe Institute's *Equipment Failure: Feeble Business Investment Costs Canadians Their Competitive Edge*, as well as numerous publications by academic institutions, think tanks, Statistics Canada, and independent researchers across the country.

communications technology (ICT) industry. Therefore, we recommend a targeted review aimed at ensuring that the tax system fosters the government's economic goals, to be led by an independent panel.

3. A tailored set of initiatives to unleash SME investment. Small and medium-sized enterprises (SMEs) are the backbone of Canada's economy, representing 60 percent of private-sector employment and a third of Canada's GDP. However, Canadian SMEs invest less than their American counterparts, and they export less, in aggregate, than their Organization for Economic Co-operation and Development (OECD) peers. The challenges these companies face are different from those faced by large corporations, and require different solutions. The government should expand its advisory service programs, prioritize its export support programs, and promote the adoption of innovation and technology. These changes will stimulate greater investment by SMEs from coast to coast, helping them achieve sustainable growth.

Together, we believe these recommendations will not only provide an enduring boost to business investment, but lead to a more resilient Canadian economy and provide a step change in our long-term economic growth.

■ ■ ■

In the new global economy, business investment is more important than ever

Change is the hallmark of our new economic era, and navigating it requires businesses to invest. Globalization and the accelerating pace of technological change are putting pressure on companies to reinvent themselves, transform their business models, and move into new markets faster than ever. Workers will need to acquire new skills as automation and other technological advances make their older ones become obsolete.

No sector of the economy, and no region of the country, is immune to disruption. Incumbents in industries as diverse as automotive manufacturing, financial services, and entertainment are under attack by new challengers such as Tesla, Wealthsimple, and Netflix. Whether they offer services or sell goods, companies are finding their business models threatened by innovative new technologies. Advances in additive manufacturing, for example, are increasingly enabling manufacturers' customers to print their own parts, reducing the need for factory machines, production lines, and transportation services. Even dominant players face the threat of disruption. Many retailers, for example, have been relatively slow to respond to the emergence of e-commerce, opening the door for Amazon to capture substantial market share.

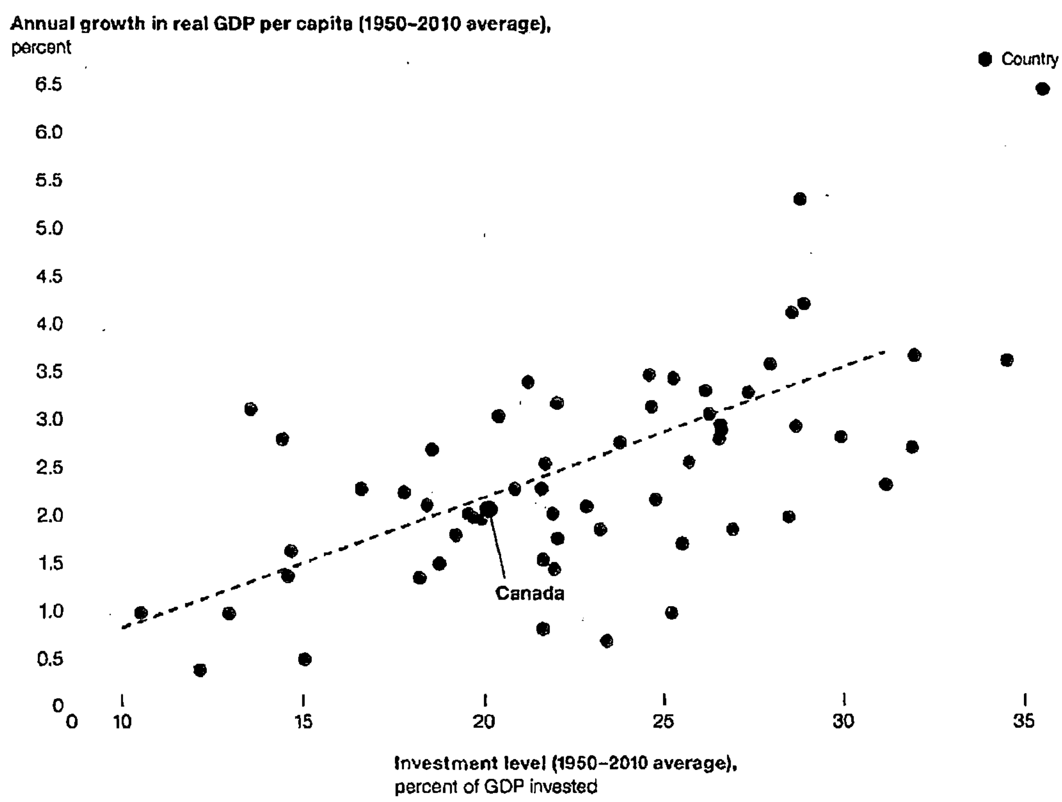
These shifts affect all participants in the economy—businesses, workers, suppliers, communities, and governments. (Our accompanying report, *Learning Nation: Equipping Canada's Workforce with Skills for the Future*, looks in depth at the impact of disruption on workforce training and the investments needed to enable workers to capture the opportunities created by the changing global economy.)

Companies must invest to adapt and grow. John Deere, for example, which has produced tractors and other farm equipment since the early 19th century, invested substantially over the last decade in its digital capabilities. The company is now a world leader in precision farming, Internet-enabled farming equipment, and agriculture analytics.[3] Similarly, Enbridge recently piloted the use of fibre-optic cables along pipeline routes to detect the small vibrations or changes in heat or sound that are characteristic of oil leaks, allowing it to detect and contain leaks more quickly.

Investment is also a core driver of productivity and growth in the broader economy.[4] For example, investment by farmers in combine harvesters during the first half of the 20th century helped them manage more land and produce bigger harvests. As a result, the percentage of the workforce employed in agriculture fell from 64 percent in 1850 to 2 percent today, while the output of the farming sector increased. This paved the way for the shift in employment to the manufacturing industry, and the accompanying increase in living standards.[5] Today, some farmers use technologies such as drones and sophisticated instruments to measure the health of their crops and determine the optimal level of water and nutrients they need, which could help double yields.

These types of advances drive sustained economic growth, resulting in rising living standards.[6] Exhibit 1 illustrates this point: over a 60-year period, countries with higher levels of business investment tend to be the ones with higher levels of income, as measured by real GDP per capita.[7] As markets and business

Exhibit 1 **There is a strong relationship between investment levels and GDP growth per capita.**



Source: Analysis of World Bank data by Christopher Ragan

000035

models continue to evolve at an ever-increasing pace, the need for such investments will become ever more urgent.

Broadening the definition of investment

Traditionally, economists have focused on three types of business investment: investment in facilities, such as office buildings and factories, known as non-residential structures; investment in machines and equipment (M&E), such as trucks, conveyor belts, and computers; and investment in intellectual property (IP)—that is, the research and development that leads to innovative products and services.

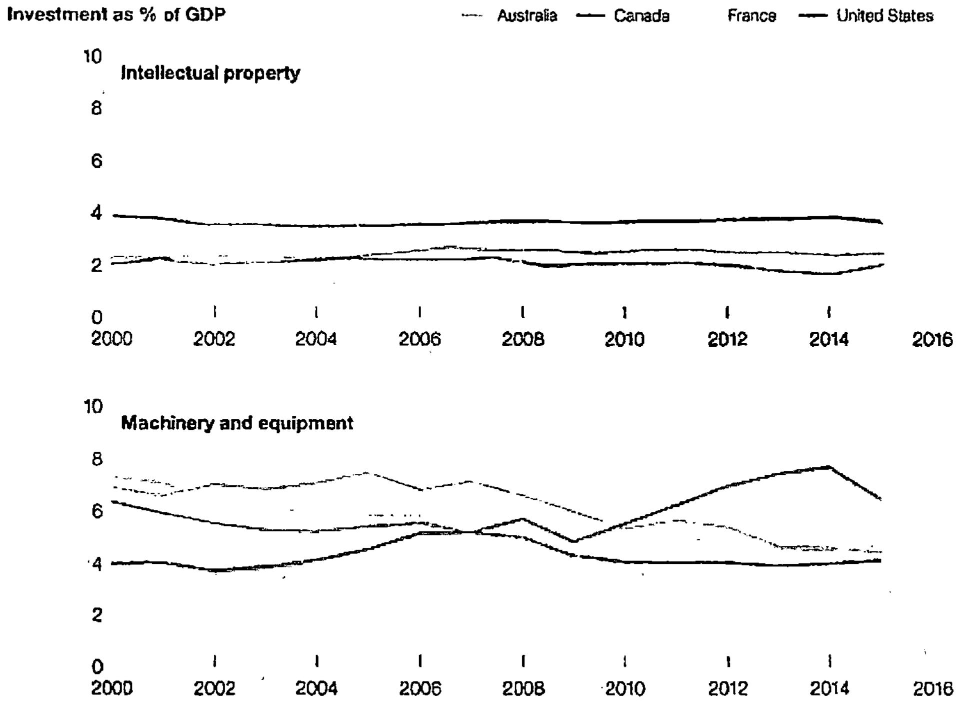
Today, however, gains in productivity increasingly come from other types of investment. Investing in human capital by establishing worker-retraining programs or partnerships with educational providers makes employees more productive and allows them to reap the benefits of new employment opportunities created by technological progress.[8] Investment in adopting innovations developed by other companies rather than through internal R&D, meanwhile, can be a cost-effective and low-risk way to raise productivity.

Investments in data increase product vity, too. Through data analytics, companies can gain fresh insights about their consumers and operations. For example, in healthcare, new analytics solutions assess large pools of patient data and rapidly identify risk factors emerging in certain populations, as well as more effective solutions to treat them.[9] Data and digital solutions play an increasingly important role across all industries. Cross-border flow of data and information is expected to grow at 37 percent per year over the next five years.[10] Half of al traded services are digital; e-commerce now represents approximately 12 percent of the world's trade in goods; and by 2020, nearly a billion shoppers will spend nearly a trillion dollars in cross-border purchases.[11] Thus, while investments in physical trade infrastructure will continue to be essential for promoting trade in physical goods, investments in data will be increasingly important for promoting trade in services.

Despite a plethora of initiatives, Canadian businesses are not moving quickly enough

In the face of these changes, Canadian companies must invest more, invest differently—and invest now. Canada's record of investment is mixed. As a percentage of GDP, Canada invests 5.4 percent in M&E and 3.3 percent in IP—below the OECD average in both categories, and far behind the United States, which invests 6.6 percent and 5.0 percent, respectively.[12] On a per-worker basis, this means Canada has invested 30 percent less than the United States since 2000, and also trails other developed economies, such as France and Australia (Exhibit 2).

Exhibit 2 **Business investment intensity in Canada relative to peers**



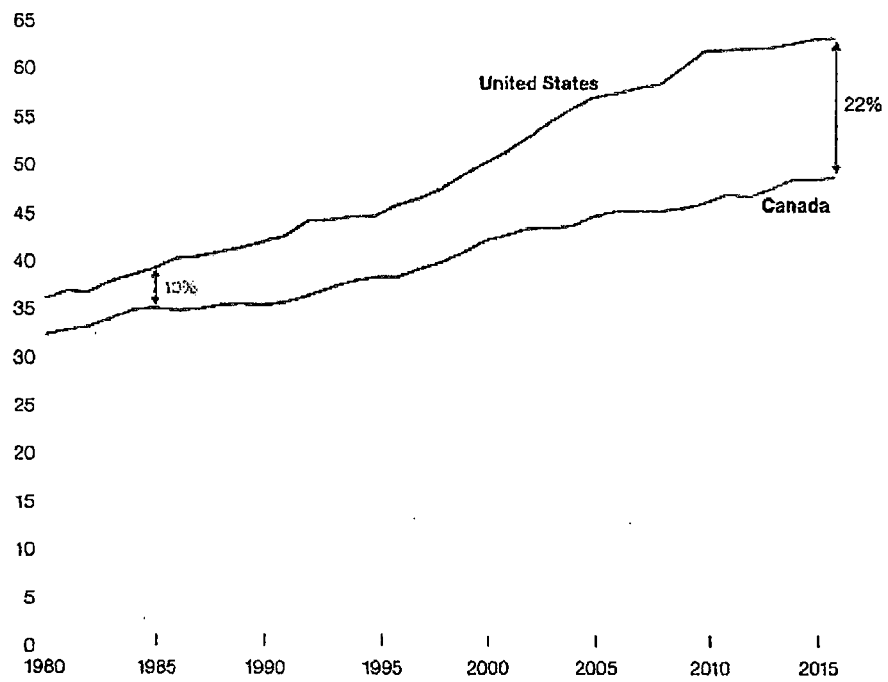
Source: Organisation for Economic Co-operation and Development

The relatively low level of M&E investment is due almost entirely to meagre investment in information and communication technology (ICT), which accounts for more than 80 percent of the M&E investment gap between Canada and the United States.[13] ICT investment significantly boosts productivity, and it is essential to competitiveness in an age of disruptive technological change.

And while investment in non-residential structures has generally been healthy, recent announcements suggest a worrying shift. The cancellations of TransCanada's $16-billion Energy East pipeline and Pacific NorthWest's $36-billion liquid natural gas (LNG) facility, for instance, will substantially reduce capital investment in structures in the coming years.

Exhibit 3 **Labour productivity in Canada and the United States**

GDP per hour worked (PPP adjusted USD at 2010 constant prices)

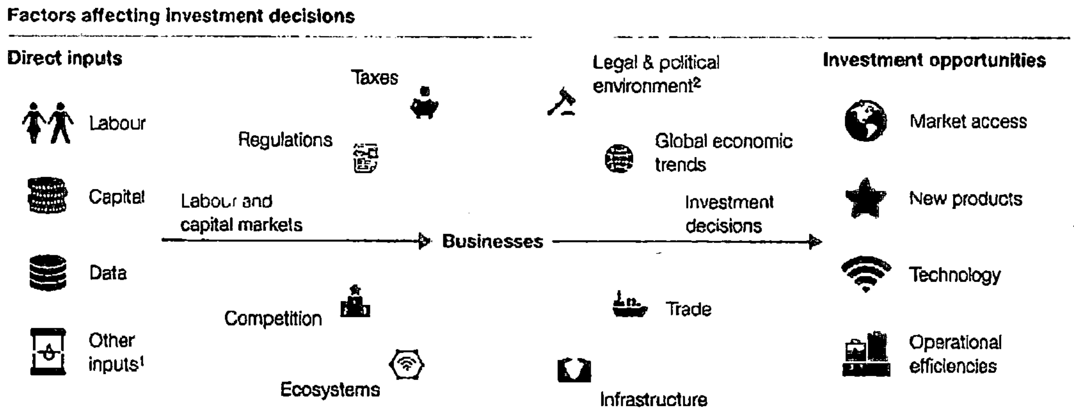


Source: Organisation for Economic Co-operation and Development

Years of underinvestment have contributed to Canada's lagging productivity,[14] which has slipped from 90 percent of US levels in 1985 to 78 percent of US levels in 2016 (Exhibit 3).[15] Over this time period, Canada's productivity growth ranked 15th-slowest out of 18 comparable OECD economies, and real median wages have remained effectively flat. While investment growth has spiked in the past three quarters, it is not sufficient to make up for decades of underinvestment.

The Council is cognizant of the numerous challenges to raising business investment. Canada's relatively low population density and our ageing population, for instance, are two factors that present barriers to investment. Additionally, many interrelated factors within the economy influence business investment

Exhibit 4 **Numerous factors influence business investment decisions**



[1] E.g. Raw materials, land, energy.
[2] E.g. Low geopolitical risk, well-functioning legal system, patent protection, etc.

decisions—from the existence of competitive pressures to modern infrastructure (Exhibit 4). And strong investment is both a *product* of a healthy economy and a *driver* of one. Thus, governments must consider a range of policies to improve investment, which in turn can create a virtuous cycle of economic growth.

For three decades, Canadian federal governments have implemented numerous economic measures that, directly or indirectly, aimed at promoting healthy business investment. We expect that the Council's previous recommendations will also contribute to higher levels of business investment. (See Box 1 for specific examples of each.)

But the government must do more, and soon. In a recent poll of 60 of Canada's largest companies, 30 percent of leaders said that Canada was a worse place to invest in than other countries in which their companies invested; only 14 percent said it was better. Additionally, a third said the investment climate had deteriorated over the past five years, while only 2 percent said it had improved.

The Council has undertaken extensive consultations with the business community and researchers in a wide array of fields to understand the root causes of these issues. Business leaders told us that investment opportunities, competition, and access to markets were three key factors influencing their investment

Box 1

Prior measures to promote investment, innovation, and economic resilience

For decades, Canadian governments have undertaken efforts to improve the economy and promote investment, innovation, and integration with the world economy.

Federal government initiatives

- Taxes. Since the early 2000s, the governments have made concerted efforts to make corporate tax rates in Canada more competitive as a means of attracting foreign companies and encouraging Canadian ones to invest.
- Trade. The signing of free trade agreements with countries representing 55 percent of the world's economy has given Canadian companies easier access to business opportunities abroad.
- Foreign direct investment. The government has signed foreign investment promotion and protection agreements with 36 countries, offering Canadian companies greater access to foreign markets.
- Innovation. The Business Development Bank of Canada (BDC) and the Venture Capital Action Plan give innovative young companies financing to support growth and new investments.
- Inflation. The federal government and the Bank of Canada have explicitly targeted and achieved low, stable inflation since the early 1990s. This contributes to overall economic stability, minimizing the risk of macroeconomic shocks.
- Regulation. Notable regulatory initiatives that support investment include the Canadian Free Trade Agreement, which came into force in July 2017, reducing barriers to trade between provinces, and the Cabinet Directive on Regulatory Management, improving the efficiency of regulation.

The Council made several earlier recommendations that we expect will drive economic growth and support higher levels of investment.

The council's prior recommendations

- Establish an Infrastructure Bank. The bank will channel substantial additional private capital into infrastructure projects across Canada, boosting investment.
- Unlock innovation to drive scale and growth. The recommendations from the Council's February 2017 report that the government is in the process of implementing—including the Superclusters Initiative and the Canadian Business Growth Fund—are geared toward supporting investments in innovative companies and industries with a high potential for growth.
- Invest in Canada Hub. The proposed agency would squarely focus on attracting more foreign capital to Canada. This capital would translate into higher levels of business investment.
- Boost trade. Increasing access to foreign markets, including China, India, and Japan, encourages the growth and prosperity of Canadian companies. In an increasingly interconnected world, this will be essential to remaining competitive.
- Re-skilling. The establishment of a FutureSkills Lab and training programs supporting adult workers are critical components of the strategy to boost the country's competitiveness and productivity.

Exhibit 5 **Priority issues for Canadian business leaders**

■ Respondents who disagree or strongly disagree ■ Respondents who agree or strongly agree

Factor[1]	Survey question	Disagree/Agree: disagree or strongly disagree	Disagree/Agree: agree or strongly agree	Relative importance (out of 10)[3]
Investment opportunities	My company has many attractive commercial investment opportunities	5%	49%	7.2
Costs	Major costs my company faces (e.g. labour, utilities, transportation) are globally competitive	34%	21%	5.9
Competition	High levels of competition in my industry incentivize my company to invest in order to maintain a competitive edge	8%	57	5.6
Regulations	The regulatory environment is efficient and does not impose substantial additional costs on my company	[illegible]	13%	5.3
Access to markets	My company has access to sufficiently large markets to justify new investments	10%	[illegible]	4.9
Taxes	Tax rates are attractive	36%	13%	4.8
Stability	The level of political stability and legal certainty promotes a healthy investment environment	15%	[illegible]	4.4
Access to talent	My company has sufficient access to talent	3%	59%	4.2
Modern infrastructure	Infrastructure is sufficiently modern and enables my company to operate efficiently	11%	[illegible]	3.6
Government programs	There are strong government programs that encourage my company to invest (e.g. R&D tax credits, government grants)	[illegible]	11%	2.1

[1] Costs, taxes, and regulation highlighted for emphasis.
[2] Other possible responses were "somewhat agree", "neither agree nor disagree", and "somewhat disagree"
[3] The relative importance of each factor for investment decisions. Respondents ranked each factor out of ten; average scores are shown.

Source: Business Council of Canada Survey of Canadian business leaders, 2017; n = 61

decisions, and they view Canada as performing well in each of these areas. However, the executives cited input costs, regulations, and taxes as also playing important roles in business investment decisions, and graded Canada poorly in these three areas (Exhibit 5).

While it is difficult for the government to directly lower input costs for Canadian businesses,[16] it can—and must—tailor the regulatory and tax systems to a more dynamic era of technological disruption and global competition. As well, there is an additional set of investment challenges faced by SMEs in Canada.[17] A 2017 survey by the BDC looked at the barriers to growth among high-impact firms,[18] and highlighted

a number of challenges associated with financing operations, attracting talent, and a lack of confidence in the economy. The fact that these challenges differ from the issues faced by large businesses underscores the complexity of Canada's investment problem and the need for a multifaceted approach.

Reforms in these three areas have the highest potential to spur the investment and innovation that Canada needs to remain competitive in the evolving global economy. They also fall squarely within the purview of the federal government.

In addressing these three topics in our recommendations, we build on the substantial work already conducted by many of Canada's economists, universities, think tanks, and governments, including the C.D. Howe Institute, Conference Board of Canada, Canadian Chamber of Commerce, and Statistics Canada. Collectively, groups such as these have transformed the policy debate in this country and helped governments for decades make better-informed, more thoughtful decisions. Our recommendations in this paper would not be possible without their contributions.

Our recommendations

Recommendation: Establish an agile regulatory system designed for the new economy

Among OECD nations, Canada ranks in the top five on many key measures of regulatory governance.[19] Our system also has done well in safeguarding Canadians' health and our environment, ensuring fairness in commerce, and providing stability to our economy, as during the financial crisis of 2007–2008.

But to grow the economy, we must change how we design and administer regulations in many sectors. In a turbulent world of digital disruption and growing global trade, regulatory measures can both serve the public interest *and* encourage innovation. But to achieve this balance, we need to regulate differently than we have in the past. Building on our system's strengths, we need to enact changes based on three priorities:

1. Catalyze innovation across the economy. Regulation must accommodate—if not outright foster—emerging technologies and business models, especially in high-potential sectors. For instance, immunology researchers are discovering ways to strengthen our bodies' natural immunity to diseases, but for Canadians to benefit from these discoveries, regulators need to be agile enough to implement rules that foster novel breakthroughs while also ensuring patient safety. Fintech companies, meanwhile, are simplifying how we invest and interact with our banks—challenging how we think about financial services, let alone how we regulate them. The question is: how can Canada develop a world-class regulatory environment that helps cultivate, attract, and retain the most innovative companies?

2. Drive coordination between agencies and jurisdictions. Many Canadian companies that operate internationally and across provincial borders have to comply with inconsistent and overlapping rules among regulatory agencies and jurisdictions. We can improve the environment for investment by harmonizing rules and better coordinating regulatory agencies, both within Canada and internationally.

3. Promote efficient and predictable regulation. Slow regulatory processes and overly burdensome regulations increase costs for entrepreneurs and businesses (often unnecessarily), and hinder their pursuit of new initiatives. We need to streamline inefficient and unpredictable regulatory processes.

Meeting these objectives will foster more businesses investment, stimulating faster economic growth for Canada, along with more well paying jobs. But making these changes won't be easy. We recommend the government establish an Expert Panel on Regulatory Agility—an independent, standing body comprising private-sector and academic representatives—to guide its future regulatory plans. This panel, which we describe in greater detail later in this report, will act as the driving force behind the three priorities that our regulatory system must reflect.

Priority #1: Catalyze innovation across the economy
In an era of accelerating global shifts, regulations must evolve hand-in-hand with the industries they govern, and encourage the development and testing of new ideas. This means the regulatory system must be open, flexible, and quick to adapt. However, drafting of regulations is typically a careful and time-consuming process. To reconcile this contradiction, some countries are implementing frameworks and policies that allow regulators to keep pace with sectors undergoing rapid evolution.

- In 2014, the United Kingdom launched Project Innovate, an initiative dedicated to supporting innovative financial services companies. Among other policies, Project Innovate created a regulatory "sandbox"—a policy framework that allows new financial services companies to safely test new business models without the burden of having to conform to all regulatory requirements.[20]

- The Japanese government has adopted fast-track approval processes for regenerative-medicine solutions that were originally outside the purview of traditional regulators, ensuring that patients and investors alike benefit from these breakthroughs quickly.[21] The country has also implemented regulatory sandboxes similar to those the United Kingdom is embracing.

- In Sweden, government agencies and the private sector collaborated to define new regulatory standards for the world's first electric road system.[22] The government recently opened a two-kilometre strip of highway to pilot this technology—the first of its kind in the world.[23]

Canada is starting to experiment with similar policies—one example is Ontario's ongoing pilot program to test self-driving vehicles[24]—but we need to do far more. For instance, we need up-to-date rules on the collection, storage, and use of data as they will determine how Canadian firms innovate and compete.[25] Canada needs to be more forward-thinking when designing these rules.

Priority #2: Drive coordination between agencies and ju isdictions
A regulatory system can stall innovation if it is beset by overlapping, even conflicting regulations across regulatory bodies, regions, and trading nations. Inconsistent or duplicate regulations add unnecessary compliance costs and administrative burdens to businesses, and impede innovation. In the healthcare sector, for example, different regulatory standards among provinces limit the adoption of some diagnostics in parts of Canada—including ones with proven results, such as the highly effective FIT colorectal test for cancer. Introduced in British Columbia and Alberta in 2013, the test remained unavailable in Ontario in late 2017. We must eliminate this type of inconsistency if we are to create an environment that attracts global innovation and in which Canadian companies will flourish.

We must improve regulatory coordination in other respects, too. Legal and institutional barriers prevent agencies from sharing information when developing regulations; that must change. And government must include input from private-sector stakeholders in regulatory cooperation initiatives, such as the newly minted Regulatory Reconciliation and Cooperation Table.

Federal agencies also need to collaborate better with their provincial and international counterparts in setting regulatory objectives, standards, and enforcement mechanisms. While the federal government shares legal jurisdiction with other governments in many areas, it should use its influence and leadership to promote harmonization.[26]

Better coordination can make a significant difference. For example, Canada and the United States worked together through the Canada-US Regulatory Cooperation Council (RCC) to align energy efficiency standards across the two nations.[27] In addition, regulators on both sides of the border continue to share insights on how best to regulate drones.[28]

Priority #3: Promote efficient and predictable regulation

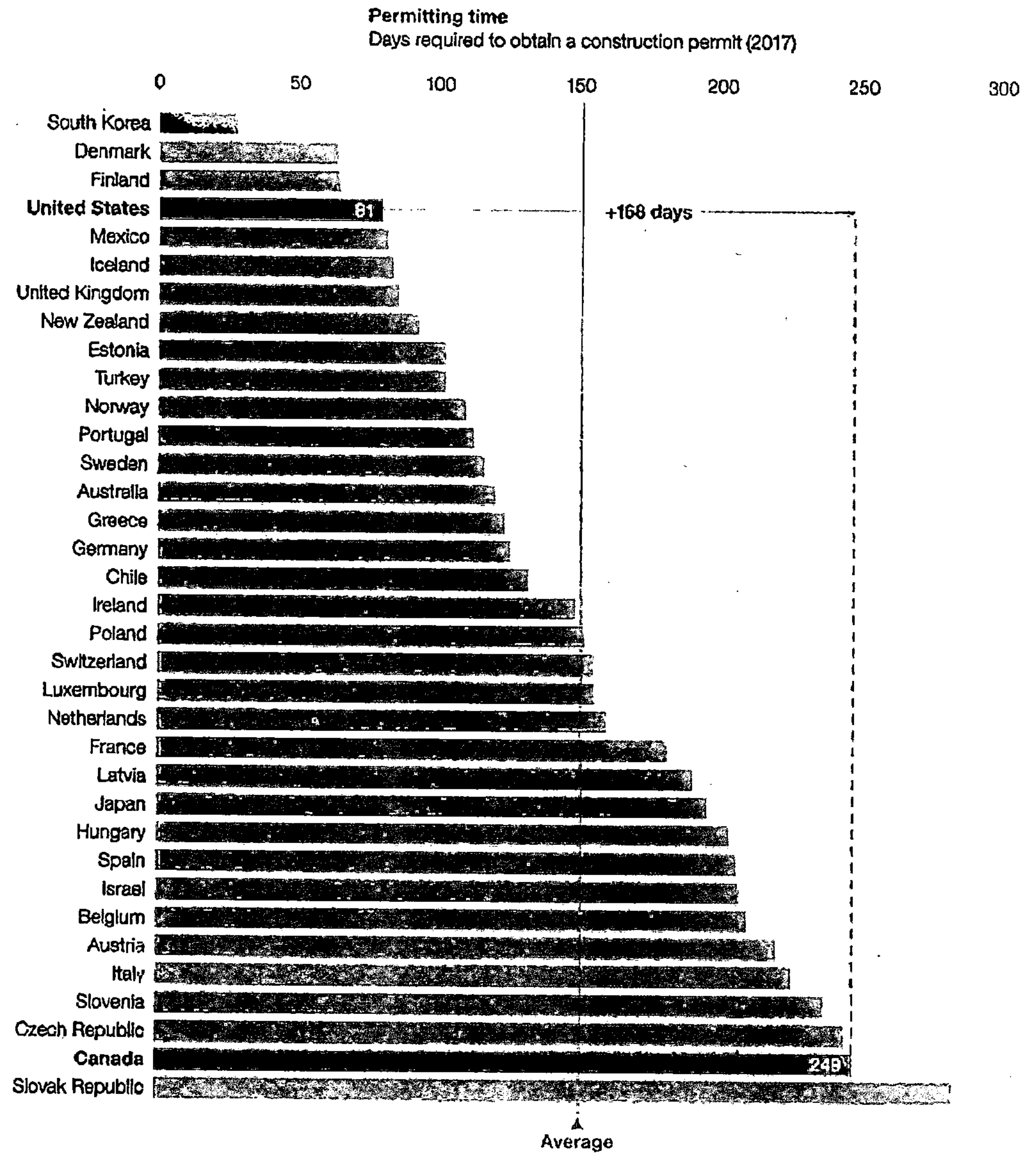
To stimulate more investment and attract more capital, Canada should aspire to set the global gold standard for regulatory efficiency and predictability. Efficient regulations achieve their intended social outcomes without imposing substantial unnecessary costs or delays on businesses. The Council believes there are several areas where regulatory efficiency must improve. For instance, researchers cite the stringency and detailed filing requirements of our regulatory system as one of the reasons that new drugs are introduced to Canada, on average, almost a year and a half after they are in the United States or Europe.[29] Service standards for various administrative processes—currently established by each department—could be set more aggressively. The approval process for major infrastructure and energy projects can take far longer than in other countries (see Box 2).[30] And Canada ranks 32nd out of 35 countries on the OECD's FDI restrictiveness index—an issue exemplified by ownership restrictions in the rail industry, which differ even between individual companies.[31]

These challenges are not isolated to the federal level.[32] The World Bank's *Doing Business* report, for example, ranked Canada 34th out of 35 OECD countries in the speed of permit granting for new construction projects, based on municipal permitting times in Toronto (Exhibit 6).[33]

Regulations can also be made more efficient and transparent by raising the engagement of the private sector in their design, particularly in new and emerging industries. Actively seeking regular private-sector feedback would allow regulatory bodies to better understand the potential impact of regulatory proposals and to potentially find less burdensome alternatives that achieve the intended outcomes. The United States, for instance, administers a single, centralized web portal where all proposed regulations are posted for public comment. The initiative has facilitated the submission of more than 1.7 million comments and proposals since its inception six years ago.[34]

Finally, applying regulations in a predictable and consistent manner helps businesses plan for the costs associated with abiding by the rules. Canada's regulatory system sometimes fails to meet this standard, particularly in industries where approval processes are complex, such as natural resources and pharmaceuticals.

Exhibit 6 **Canada ranks 34th out of 35 OECD countries in terms of the time required to obtain a permit for a new general construction project—168 days longer than the United States**



Source: The World Bank Doing Business Report

Design principles for the Expert Panel on Regulatory Agility

The government should form an Expert Panel to oversee a wide-ranging review of existing regulations (so-called regulatory stock) and the relevant management processes. It also should undertake a comprehensive assessment of the aggregate regulatory burden shouldered by Canadian businesses. Taking account of this burden will be an important—albeit challenging—first step in reducing unnecessary and costly regulation. And while the Council is encouraged by recently published drafts of the new Cabinet Directive on Regulatory Management, which directs each department to evaluate its regulatory stock, such an assessment must be conducted across government.

In convening the panel, it is vital to ensure that the combined group has relevant expertise, independence, the ability to affect policy, and freedom to coordinate with other government bodies:

Relevant expertise. The panel should be led by representatives of the private sector and academia who would advise on changes occurring within key industries. Such a group would be best positioned to provide direction on the urgency and nature of the regulatory challenges facing Canadian companies, and provide input into the development of tools that can help drive effective and efficient regulations. The panel would also be supported by staff from the Treasury Board Secretariat to ensure that it leverages the considerable regulatory expertise within the government.

Collaboration forums. The Panel should host "co-creation projects"—forums that bring together private-sector representatives (incumbents and disruptors), government officials, and other stakeholders to collaborate on the design of new regulations in rapidly evolving industries. While the government would make all final decisions, these projects would inform how best to design regulations that both foster innovation and protect the public interest.[35]

Independence. The panel should be ndependent from the government so that it can make objective recommendations. To this end, it should be funded for an initial three- to five-year period before a review ensures its continued relevance and effectiveness.

Policy impact. The panel should make its recommendations directly to the Treasury Board, the Cabinet Committee responsible for regulatory oversight and planning. Its findings then would be published to ensure transparency, and the Treasury Board would have the responsibility to publish a formal response.

Coordination with other government bodies. The panel should work closely with the Economic Strategy Tables to ensure they are aligned with one another. It would also coordinate with existing regulatory cooperation forums, such as the Regulatory Reconciliation and Cooperation Table and the Canada–US Regulatory Cooperation Council.

Taken together, we are confident that the process outlined above can transform Canada's regulatory system into one that enables investment and serves as a catalyst to innovation. Implementing them would be a significant step toward ensuring that Canada continues to have a vibrant, dynamic economy, regardless of the disruptions that technology or globalization may bring.

Box 2

Regulatory barriers to innovation in high-potential industries

Life sciences and healthcare. Canada has distinct advantages in these sectors, but we must update our regulatory policies if we are to capture the full economic opportunity presented by rapid advances in fields such as immunology and medical devices. Differences in standards and approval processes among provinces and between Canada and other countries slow the adoption of new treatments. The 2015 Report of the Advisory Panel on Healthcare Innovation, for example, argues that Canada lags in its adoption of international regulatory standards for medical devices. Similarly, lack of common provincial standards in the regulation of electronic health records limits our ability to take advantage of advances in healthcare analytics.[1] This not only curbs researchers' efforts to tap nationwide pools of data for insights, but can prevent institutions within the same city from sharing patient records —even when instructed to do so by patients.[2]

Fintech. Global investment in fintech is growing at almost 40 percent per year—a trend that will significantly disrupt the financial services industry. Canada has the potential to lead in this arena, thanks to the size of our financial sector, the strength of our banks, the cutting-edge research occurring at Canadian universities, and the growth of fintech innovation clusters. However, the full potential isn't realized, in part because burdensome regulatory requirements discourage start-ups and slow their growth. Similarly, differing policies among provinces prevent new companies from expanding nationwide.[3] Greater collaboration between regulators, combined with more flexible regulatory policies, could help stimulate the sector. For example, the 2017 report *The Blockchain Corridor* argues that the lack of a national strategy on the regulation of blockchain technology greatly hinders Canada's ability to create global champions in this growing field. Other countries are embracing this challenge: for example, the Monetary Authority of Singapore (MAS) recently identified the establishment of conducive regulations as "one of the most critical pieces [to] get right" to support the industry.[4]

Oil and gas. Regulations play a particularly important role in the natural resource sector in protecting workers, the environment, and the rights of Indigenous people. However, regulations must be more predictable and efficient to avoid unnecessarily discouraging investment. The average pipeline approval time in Canada is between five and six years, significantly longer than in peer economies such as Australia or the United States. In the latter, approval times are a mere 18 to 20 months.[5] The impact of these delays is substantial; Kinder Morgan estimates it spent $600 million to comply with the approval process for its proposed TransMountain pipeline. One potential solution would be for the Federal Cabinet to make rulings early in the approval process before investors have committed significant time and capital. We also acknowledge the ongoing *Review of Environmental and Regulatory Processes*. In this context, we underscore the importance of striking a balance between the development of Canada's natural resources in a responsible and sustainable manner and maintaining a regulatory environment that is conducive to investment.

Manufacturing. Advances in automation and additive manufacturing (i.e., 3D printing) could fundamentally transform the production and distribution of industrial goods, affecting companies throughout the manufacturing supply chain. It is essential that Canadian manufacturers keep up with these changes—something that is only possible if our intellectual-property laws balance the rights of innovators and consumers.[6] For example, without adequate regulatory protections, patented physical objects could be 3D-printed without permission, harming patent creators.[7]

Box 2

Agri-food Innovation is boosting productivity in this sector around the world. In the Netherlands, farms use cutting-edge techniques to grow tomatoes using less than one-twentieth of the water per pound of product than the global average.[8] An innovation-friendly business climate is fundamental to realizing similar productivity gains in Canada. Coordinated regulatory standards between provinces and with foreign regulators will reduce costs and foster more investment in the sector. For example, growing regulatory obstacles to trading with the United States has added substantial burdens to agri-food companies in the last decade.[9]

[1] For more detail, see chapter 7 of the Report of the Advisory Panel on Healthcare Innovation, *Unleashing Innovation: Excellent Healthcare for Canada, Government of Canada*, July 2015, canada.ca.
[2] Other examples exist as well. Advances in stem cell technology have outpaced the speed of regulatory change, with provincial regulators and Health Canada not yet having implemented policies that govern many stem-cell-based procedures that are available in Canadian clinics.
[3] For example, the November 2017 Conference Board of Canada report on crowdfunding cites a lack of harmonization between provincial regulators as one of the barriers that will need to be overcome in order to stimulate growth in crowdfunding. *Wisdom of the Crowd? Crowdfunding and Canadian Innovation*, Conference Board of Canada, November 2017, conferenceboard.ca
[4] As cited in a November 2017 speech by the managing director of the MAS. The full transcript of the speech is available at mas.gov.sg.
[5] HIS Markit report, cited in Stikeman Elliott, "The Timing of Major Energy Project Reviews," *Calgary Herald*, April 24, 2017, pressreader.com.
[6] Brett Slaney and Antonio Turco, "No Glasses Required: 3D Printing and the Current Canadian IP Framework," December 18 2013, lexology.com.
[7] Rajeev Sachdev, "3D Printing Raises Intellectual Property Legal Issues Not Seen Before in Traditional Printing," IP Osgoode, October 26, 2016, iposgoode.ca.
[8] Frank Viviano, "This Tiny Country Feeds the World," *National Geographic*, September 2017, nationalgeographic.com.
[9] Bob Seguin and Janalee Sweetland, *Drivers of Canadian Food Processing Competitiveness: Macro Factors and Micro Decisions*, Canadian Agri-Food Policy Institute, February 2014, capi-icpa.ca.

Recommendation: Modernize the Canadian tax system through a targeted review to ensure it drives investment and innovation in the new economy*

An overdue review

Canada needs to update its tax system to create incentives for investment and innovation. To accomplish this, the government should undertake a targeted review. The global economy has evolved considerably since our tax system underwent the most recent significant review in 1986. While investment in physical capital such as factories and equipment once was the primary driver of economic growth, today it is intellectual capital that powers the economy. The value of intellectual property licensed in Canada, for example, has risen from $56 million 30 years ago to over $4.5 billion today—an 80-fold increase.[36] Moreover, Canadian companies increasingly must compete with companies based anywhere in the world.[37] And there are indications that current policy does not support these goals: there are opportunities to improve the tax-incentive

*The Council wishes to thank Jeffrey Trossman of Blakes for his contributions to this section of the report.

programs for innovation; introduce favourable tax treatment of intangible assets and intellectual property; put all sectors of the economy on a level playing field; maintain competitive corporate tax rates in the face of changing global conditions, while ensuring that everyone pays their fair share; and apply a customer experience lens to tax administration.

The Council believes three priorities should guide how Canada shapes its tax system to support investment and growth. We highlight specific policies that merit further consideration in Box 3.

Priority #1: Foster the development and adoption of innovation

Effective tax policy can encourage investment in innovation by both established and growing companies by smoothing financial returns over time and supporting high-risk, high-reward bets. There is a notable need for more of this type of support in Canada.[38]

Several improvements to Canada's suite of tax-incentive programs could help provide this. First, administrative changes to existing programs such as the $3.6-billion Scientific Research & Experimental Development (SR&ED) could allow them to deliver greater impact, as we detailed in our earlier report, *Unlocking Innovation to Drive Scale and Growth*. Second, Canada should introduce new tax-incentive programs based on models that have proven effective in other countries. For instance, the United Kingdom, the Netherlands, and Ireland have reduced rates on taxable income derived from the exploitation of intangible property in order to encourage businesses to not just conduct research but commercialize it. Third, Canada should review long-standing tax measures that are intended to support higher levels of investment but may no longer be appropriate. It could, for example, reduce depreciation periods for certain types of intangible assets, a move that would boost after-tax returns on such investments.

Moreover, the government can do more to moderate the impact of uneven tax rates between sectors or geographies, which distort the after-tax returns on investments. Such distortions lead to inefficient allocations of capital to investments with lower returns, limiting productivity growth. The manufacturing industry, for example, benefits from a marginal effective tax rate of 8 percent—roughly one-third of the rate applied to the information and communications technology (ICT) industry, putting ICT at a disadvantage in attracting investments.[39]

Priority #2: Solidify Canada's position as a global magnet for investment and talent

Global competition for foreign direct investment is intense, especially as developing countries have increasingly started to fight for capital.[40] While Canada is an attractive destination for investment today,[41] changes in tax policy could improve our competitive position. The tax rate on new investments—known as the marginal effective corporate tax rate[42]—is 17 percent, second lowest in the G7 behind the United Kingdom. A 2016 KPMG study ranked Canada as having the lowest overall corporate tax burden among ten peer advanced economies across a number subsectors, including R&D (e.g., biomedical research), digital services (e.g., software production), and corporate services (e.g., securities trading).[43]

But as other countries embark on tax reform, Canada may see its enviable competitive position erode, reducing FDI inflows. Proposed tax changes in the United States, for example, may reduce rates to levels in line with or below Canada's, produce more favourable rules for deducting capital expenditures, and lead to the adoption of a "territorial" system that encourages repatriation of corporate profits.

Box 3

Tax policies meriting further consideration

Streamline existing programs that support investment. Canada's $3.6-billion SR&ED program encourages companies to conduct research and development, which boosts those companies' productivity, which in turn provides spillover benefits for the surrounding ecosystem. As previously noted, there is an opportunity to make these programs even more impactful by, for example, simplifying the complex application and auditing processes.

Introduce new programs that support investment. The government should continue to assess the effectiveness of new tax instruments. For example, a growing number of countries and jurisdictions—including Quebec and British Columbia—have introduced "patent box" programs over the past decade.[1] These programs allow companies to pay lower tax rates on income derived from the exploitation of intangible property, such as licensing software. By raising the return on investment for such projects, the programs encourage businesses to commercialize research discoveries.

Adjust withholding tax rates. Unlike many other advanced economies, Canada makes companies pay "withholding taxes," which are taxes on the royalties that Canadian companies pay to businesses in other countries for the use of their intellectual property, such as patents and software. Foreign companies often pass on the increased costs resulting from these taxes to the Canadian licensees in the form of higher prices, making it more expensive for Canadian businesses to adopt new technologies developed abroad.[2] Canada imposes similar kinds of taxes on direct dividends paid to foreign investors as well, which can reduce FDI because such taxes don't exist in many peer countries.

Adjust policies that influence investment. Adapting tax rates and rules on certain types of investment could make such investments less expensive for Canadian companies. For example, some types of intangible assets (such as goodwill and unpatented know-how) are depreciated over periods in excess of 20 years, compared with 15 years in the United States. The longer amortization period reduces the after-tax return on those investments. As well, the regime for expenditures on patents generally requires the associated costs to be capitalized and depreciated rather than being expensed immediately, similarly reducing after-tax returns.

Ensure multinationals are taxed fairly. While it is important to foster an attractive investment environment, we must also make sure multinationals do not use loopholes to avoid paying their fair share of tax. In particular, countries around the world are grappling with issues around taxing digital services when customers and suppliers are based in different jurisdictions. The European Union, for example, is considering implementing a new common corporate tax base in order to avoid double taxation and opportunities for double non-taxation within the European Union. Canada's tax regime needs to be careful to strike the right balance between protecting the tax base and encouraging foreign direct investment.

[1] Nick Pantaleo, Finn Poschmann, and Scott Wilkie, "Improving the Tax Treatment of Intellectual Property Income in Canada," CD Howe Institute, April 25, 2013, cdhowe.org.

[2] Kenneth McKenzie, "An Analysis of the Economic Effects of Withholding Taxes on Cross-Border Income Flows for Canada," Advisory Panel on Canada's System of International Taxation, September 2008, fin.gc.ca. We note that the OECD Model Tax Convention, upon which most OECD members' tax treaties are based, recommends the elimination of withholding taxes on royalties; however, Canada has a longstanding reservation under which it generally imposes a 10 percent withholding tax on royalties. Recently enacted "back-to-back" rules have also increased uncertainty with respect to the treatment of cross-border royalties, in some situations.

Similarly, talent a key ingredient for innovative companies—is increasingly mobile, and tax is an important tool in the global war for talent.[44] Therefore, the Government should also review personal tax rates to ensure Canadian businesses can attract the talent they need to be innovative and globally competitive.

Transnational tax concerns also have an impact on Canada's competitiveness. Multinational companies—especially those engaged in the delivery of digital services—can shift profits to low- or no-tax jurisdictions. This has prompted governments to seek to coordinate tax systems across jurisdictions. The Base Erosion and Profit Sharing (BEPS) initiative by the G20 and OECD is one instance of this.[45] While Canada has been active in these discussions, rising levels of digital trade will only give rise to more of this type of issue.

Priority #3: Bring a customer-experience lens to tax administration

Businesses' interactions with tax authorities influence their future investment decisions. Canada Revenue Agency (CRA) has improved its customer service in recent years, in part by streamlining its online tax-filing processes, but friction points remain. During tax audits, the agency's demands for information are sometimes overly broad.[46] There are often long delays in processing appeals: according to a 2016 Auditor General's report, it takes CRA an average of 454 days to process objections to corporate income tax assessments.[47] On occasion, the agency has not followed agreements it entered into with taxpayers.[48]

CRA should leverage technology to further streamline its operations while striving to provide a better customer experience for investors, both foreign and domestic. For example, tax agencies are starting to use big data analytics to quickly and effectively audit large numbers of companies, reducing both administrative costs for the government and compliance costs for taxpayers.

The path forward

In the face of rapidly changing technology and an ever-more-competitive global marketplace, and potentially disruptive changes to US tax laws, Canada cannot afford to be complacent. Taxes have a direct impact on investment decisions by companies small and large. The world's leading entrepreneurs and workers have more flexibility than ever in choosing where to live and work, so we must ensure that our tax system supports efforts to make Canada a preferred destination for investment and talent.

While we need to adapt the tax system to the changes in the global economy, the Council does not believe a comprehensive examination like the 1966 Carter Commission is merited. Rather, we propose a targeted review, focused on identifying specific areas where our system has become an obstacle to growth and innovation. We recommend the following parameters:

- Expertise. The review should be led by a panel of independent tax experts from academia and the private sector.[49] The panel should engage in focused consultations with business leaders representing different geographies and industries to ensure that the implications of potential reforms are fully understood.

- Scope. The panel should consider changes to corporate and personal tax rates, the balance between types of taxes, and the use of tax instruments designed to support investment.

- Outcomes. Once the review is complete, the panel should deliver its report to the Minister of Finance and publish its findings, providing transparency into its work. The government, in turn, should publish a response to the panel's recommendations.

We acknowledge that the government has recently taken steps to review parts of the Income Tax Act, announcing plans to reduce the small-business tax rate to 9 percent and make changes to certain rules relating to Canadian-Controlled Private Corporations (CCPCs). Our recommendations do not directly relate to these planned changes. Once these legislative changes have been enacted, we are recommending a targeted review of other aspects of the Canadian tax regime that have a significant influence on business investment decisions and, if reformed appropriately, can help prepare Canada for the new global economy.

Recommendation: Expand advisory programs for SMEs, double down on export support programs, and promote the adoption of innovations throughout Canada

Small and medium-sized enterprises (SMEs) collectively account for more than 60 percent of private employment in Canada and a third of this country's GDP. Small businesses are also the source of many innovations—Canada's global champions of tomorrow.

Still, many SMEs fall short of their potential. Most struggle to achieve significant scale, with only one in 1,000 companies passing the milestone of 100 employees—40 percent fewer than in 2001.[50] Those that remain small do not prioritize innovation; on a per employee basis, SMEs invest one-fifteenth the amount of R&D as do large businesses.[51] Canadian SMEs also underperform their foreign peers in terms of foreign market reach and productivity.[52] And their exports represent only 25 percent of Canada's total; by contrast, the OECD average for SMEs is 40 percent.

The growth challenges and barriers to investment that smaller businesses face not only are distinct from those large companies confront but differ substantially among individual companies. However, SMEs' biggest challenges tend to be lack of access to capital, limited managerial experience, and higher relative costs due to their small size. The Council addressed many of these issues in our February 2017 report, *Unlocking Innovation to Drive Scale and Growth*, in which we recommend that the government establish a Canadian Business Growth Fund and a Canadian Matching Fund program. We also recommend a review and streamlining of federal innovation programs (this review is now under way). However, more work is needed to unleash the full potential of Canada's small and medium-sized businesses. Here, we identify three priorities that we believe will significantly spur investment and growth within this sector of the economy:

1. Expand the most successful SME advisory programs

2. Strengthen export-oriented programs to unlock $20 billion in export potential

3. Promote the adoption of innovation among SMEs

Priority #1: Expand the most successful advisory programs
High-impact SMEs—the subset of businesses that disproportionately contribute to economic growth and the creation of new jobs—often lack the confidence and expertise required to make significant investments, be it to adopt a new technology such as 3D printing or to build new capacity to access export markets. Trusted external advice can address this challenge and help SMEs deliver on their promise. For instance, research has shown that SMEs with advisory boards or access to advisory services outperform their peers.[53] While there is a wide array of advisory programs to support Canadian entrepreneurs—such as the BDC's Growth Driver Program, the federal government's Accelerated Growth Services (AGS), and numerous local, municipal, and provincial initiatives—the problem of SME underinvestment persists.

This is due to the limited scale and reach of these programs. The AGS intends to serve 1,000 firms, and BDC's Growth Driver Program currently works with approximately 100 high-impact SMEs.[54] Even in terms of its broader Advisory Services programs, BDC delivers on only about 1,700 engagements per year. These programs offer much value to the SMEs who participate in them, but the impact is a drop in the bucket in a country with more than one million SMEs.

Expanding these programs will not easy, due to the challenges of finding sufficiently high-level talent to counsel entrepreneurs and administering these offerings in a cost-effective manner. That said, we believe the upside potential is worth further attention, and suggest the following areas of focus:

- Cost. Numerous SME advisory programs charge only nominal fees for their services, with the result that many lose money. BDC, for example, reported cumulative net losses for its advisory programs of $75 million in fiscal years 2016 and 2017. The government should consider subsidizing a portion of program operating cost, allowing providers to increase the scale of their programs while simultaneously reducing the prices charged to clients.

- Access to talent. Advisory programs need a larger pool of experienced professionals who can provide meaningful counsel to business operators. While additional funding could allow these programs to attract more skilled advisers, the government should also consider expanding peer-to-peer mentoring for high-potential SMEs, as conducted by the QG100 in Quebec.

- Awareness and access. Many small-business owners are not aware of the potential benefits of advisory programs. The government should launch a national branding campaign similar to the one used to promote British Columbia's Small Business Awareness Strategy.[55] Moreover, the multitude of programs that support SMEs can make it challenging for entrepreneurs to find the ones best suited to their needs. While the government has introduced initiatives to streamline its suite of programs—such as its online Concierge service simplifying how it interacts with SMEs would help time-pressed entrepreneurs more easily access the resources they need.

Priority #2: Strengthen export-oriented programs to unlock $20 billion in export potential
Exports mean more than just growth to SMEs. By exporting, small companies diversify their markets and so better manage risk. Exporting firms are also more profitable and see higher returns.[56] However, Canadian small businesses account for only 25 percent of Canada's total exports despite representing 30 percent of

our GDP. If exports could be increased to levels proportionate with the overall GDP contribution of SMEs, revenues would jump by more than $20 billion—an opportunity that will only rise as global trade flows increase.[57]

Yet small businesses face a wide range of challenges in foreign markets, from complex regulatory regimes to tariffs. Without the scale to afford employees dedicated to understanding export markets and procedures, they are poorly equipped to tackle these issues. As a result, providing meaningful export support to Canadian SMEs must go beyond advice, and put special focus on trade financing, guidance on navigating foreign regulations, and market intelligence about foreign markets. While the Trade Commissioner Service and Export Development Canada (EDC) provide these types of services, they do so with limited reach—the EDC has approximately 6,000 SME clients out of the 73,000 exporting SMEs in Canada.

One tool used to great effect abroad are export accelerators, which provide targeted, customized advice and support to high-potential firms. The accelerators' offerings include foreign-market intelligence, help in complying with different regulatory environments, and lead generation in foreign markets. In 2013, for example, Malaysia launched the Mid Tier Company Development Programme, an accelerator designed to help promising SMEs maximize their potential in foreign markets. Participating companies saw a 15 percent increase in exports, compared with 1 percent in the rest of the Malaysian economy, and the program delivered more than $500 million in value to the mere 150 companies it has served.[58]

Priority #3: Promote the adoption of innovation among SMEs

As noted earlier in this report, investments in technology make companies more productive and competitive, helping them grow. Moreover, the need for companies to both innovate and adopt existing innovations will only become more urgent as the pace of global economic change quickens. Smaller firms, however, tend to underinvest in new technologies and R&D, in part because the potential benefits that such advances can offer are not widely known.[59]

The government should encourage greater adoption of innovations by Canada's small and midsize businesses. It could consider, for example, promoting peer-to-peer mentoring efforts between small and large companies that would allow entrepreneurs to learn about and see firsthand the innovations adopted by larger companies in their sector. In the recent *Made Smarter* report, a group of leaders in the UK manufacturing industry called for a similar program for the adoption of innovation to be piloted in order to nurture small business investment.[60]

Existing initiatives could also be either expanded or replicated. Between 2011 and 2014, for example, the National Research Council's Digital Technology Adoption Pilot Program (DTAPP) piloted a series of efforts to disseminate technological know-how to SMEs in Canada. Of the firms that participated, 94 percent indicated they would be more likely to adopt digital technologies.[61] The private sector initiated a similar program called the Digital Adoption Compass, which aims to strengthen relationships between companies and disseminate IT know-how online.

Conclusion

Business investment not only is fundamental to a country's economic growth, but serves as a measure of the overall health of an economy. Canadian companies' low level of investment compared with their global peers has significantly contributed to our lagging productivity.

While Canada has taken many steps in recent years to stimulate corporate spending, we must do more. The drivers of growth in a globally connected, technology-fueled era are evolving, requiring investment not only in traditional assets such as buildings and equipment, but in assets endemic to a knowledge economy: high-tech tools, data analytics, and training programs that upgrade workers' skills (a topic we address in greater detail in our accompanying report, *Learning Nation: Equipping Canada's Workforce with Skills for the Future*). As the global economy continues to rapidly evolve, the government must ensure that its regulatory and tax policies foster investment and innovation, and assist the full spectrum of Canadian businesses to pursue the opportunities presented by new technologies and growing export markets. ■

[1] "GDP per Hour Worked," OECD Data, accessed November 2017, data.oecd.org.

[2] Peter Harrison, *Median Wages and Productivity Growth in Canada and the United States*, Centre for the Study of Living Standards, accessed November 2017, csls.ca.

[3] Bernard Marr, "From Farming to Big Data: The Amazing Story of John Deere," *Data Science Central*, May 7, 2015, datasciencecentral.com.

[4] While the term "investment" is also used to refer to purchasing of the ownership rights of another business's equity, investments in new capital goods are larger drivers of economic growth; thus, the Council has focused its efforts here.

[5] "Historical Timeline—Farmers and Land," *Growing a Nation: The Story of American Agriculture*, accessed November 2017, agclassroom.org.

[6] For example, Mark Carney argued in a June 2017 speech on the British economy that "stronger investment will support productivity growth, stronger wages, and higher welfare for all." For other examples about the relationship between investment and productivity, see "Low Machinery and Equipment Investment Levels Help to Explain Canada's Poor Productivity Growth," Conference Board of Canada, April 29, 2011, conferenceboard.ca; Xavier Sala-I-Martin, "I Just Ran Two Million Regressions," *American Economic Review*, Volume 87, Number 2, May 1997; and *The Productivity Puzzle: Why Is the Canadian Record So Poor and What Can Be Done about It?*, TD Economics, June 2010, td.com.

[7] Note that even small differences in the annual rate of growth of per capita GDP, if sustained over many years, can lead to dramatic changes in average incomes.

[8] We explore the topic of human capital in detail in our concurrently released report, *Learning Nation: Equipping Canada's Workforce with Skills for the Future*.

[9] For example, IBM Watson is able to identify dietary and behavioural factors that contribute to the onset of diabetic episodes.

[10] Data by Telegeography, as cited in "Digital Globalization: The New Era of Global Flows," McKinsey Global Institute, February 2016, mckinsey.com.

[11] "The US Economy: An Agenda for Inclusive Growth," McKinsey Global Institute, November 2016, mckinsey.com.

[12] Calculated from OECD data, accessed November 2017, date.oecd.org.

[13] "Investment Intensity in Canada and the United States, 1990 to 2011," Statistics Canada, Economic Analysis Research Paper 11F0027M, Number 95, October 2014, statcan.gc.ca.

[14] Robert Brown et al., *Innovation and Business Strategy: Why Canada Falls Short*, The Expert Panel on Business Innovation, June 2009, scienceadvice.ca.

[15] Calculated from data published by the OECD. A similar study by the Conference Board of Canada estimated Canadian productivity in 2012 at $42 per hour, compared with $52 in the United States. This placed Canada 13th out of 16 comparable countries. Accessed May 2017, conferenceboard.ca.

[16] We note that governments can have an effect on labour and electricity costs through policies like minimum wage and electricity regulations.

[17] SMEs also report that the total tax burden and government regulations are among the most important issues they face. See "Canada's Red Tape Report 2015" by the Canadian Federation of Independent Business for further detail, cfib-fcei.ca.

[18] High-impact firms are the subset of small and medium-sized enterprises that contribute to growth and exports disproportionately, given their size. Typically, they are rapidly growing companies.

[19] However, while Canada ranks well on these metrics, it tends to measure the extent to which regulations drive outcomes like environmental safety or quality controls. There is opportunity to reduce the extent to which regulations burden those being regulated.

[20] The Monetary Authority of Singapore (MAS) is implementing similar rules, including frameworks that dictate when and how new [illegible] products (e.g., virtual currencies) should be regulated. For [illegible] United Kingdom's Proje[illegible] see the project's website, fca.org.uk.

[21] Daisaku Sato, *Regulatory Trends in Regenerative Medicine in Japan*, Pharmaceuticals and Medical Devices Agency, March 2016, pmda.go.jp.

[22] This road system would allow vehicles to drive using electricity transmitted directly from the electricity grid.

[23] The Swedish transportation authority worked together with the country's Energy Agency, the innovation agency of the federal government, a municipal authority, and two private-sector companies to fund and pilot an electric road system. The technology [illegible] in June 2016, [illegible] with unlimited range. It is a significant step toward the country's larger efforts to move toward fossil-free vehicle [illegible] 30. For further details, [illegible] Electric Road Opens in Sweden," news release, June 22, 2016, scania.com.

[24] Government of Ontario, "Automated Vehicles Coming to Ontario Roads," news release, November 28, 2016, news.ontario.ca.

[25] Project Innovate is administered by the Financial Conduct Authority (FCA) in the United Kingdom. While the Canadian Securities Administrators launched a similar regulatory sandbox platform in February 2017, it trails the progress of the FCA.

[26] The federal government establishes Canada's national health policy framework and supports provincial government healthcare funding with over $30 billion of transfers per year. It can use these tools to promote its federal policies across Canada.

[illegible] Natural Resources Canada, August 16, [illegible] nrcan.gc.ca.

[28] "Regulations Amending the Canadian Aviation Regulations (Unmanned Aircraft Systems)," *Canada Gazette*, July 15, 2017, gazette.gc.ca.

[29] Ali Shajarizadeh and Aidan Hollis "Delays in the Submission of New Drugs in Canada," *Canadian Medical Association Journal*, Volume 187, Number 1, January 6 2015, ncbi.nlm.nih.gov.

[30] HIS Markit report, cited in Stikeman Elliott, "The Timing of Major Energy Project Reviews," *Calgary Herald*, April 24 2017, pressreader.com.

[31] "FDI Regulatory Restrictiveness Index," OECD, March 27, 2017, oecd.org.

[32] Daniel Seens, "SME Regulatory Compliance Cost Report," Government of Canada, September 2013, reducingpaperburden.gc.ca.

[33] *Doing Business 2018*, World Bank, October 31 2017, doingbusiness.org.

[34] The US government, for example, administers the website regulations.gov, which acts as a single point of access for those wishing to provide feedback to any one of 71 federal regulatory bodies and departments.

[35] The co-creation projects run by the PCO Hub and Innovation, Science and Economic Development Canada could serve as models for these forums.

[36] "Charges for the Use of Intellectual Property, Receipts (BoP, Current US$)," World Bank, accessed November 2017, data.worldbank.org.

[37] Global trade as a percentage of GDP has grown from 27 percent of world GDP to 58 percent between 1986 and today. Source: data.worldbank.org.

[38] See, for example, Charles Plant, *Canada's Patent Puzzle*, Impact Brief, University of Toronto Impact Centre, May 2017, impactcentre.ca; Nick Pantaleo, Finn Poschmann, and Scott Wilkie, *Improving the Tax Treatment of Intellectual Property Income in Canada*, Commentary no. 379, C. D. Howe Institute, April 2013, cdhowe.org; and Aaron Jacobs and Daniel Schwanen, "Canada's 'Commercialization Gap'—an International Trade Perspective," C. D. Howe Institute, August 25, 2017, cdhowe.org.

[39] Jack M. Mintz, *An Agenda for Corporate Tax Reform in Canada*, Canadian Council of Chief Executives, September 2015, thebusinesscouncil.ca.

[40] Goran Vukšic, "Developing Countries in Competition for Foreign Direct Investment," The Vienna Institute for International Economic Studies, March 5 2015, wiiw.ac.at.

[41] Canada ranked third in the G7, ahead of the United States, in a recent ranking of overall FDI attractiveness. For more detail, see *Towards a Foreign Direct Investment (FDI) Attractiveness Scoreboard*, Copenhagen Economics, May 2016, copenhageneconomics.com.

[42] Marginal effective tax rate is a measure widely used by economists to measure the tax rate specifically on capital investment.

[43] *Focus on Tax: Competitiveness Alternatives Special Report*, KPMG, 2016, competitivealternatives.com.

[44] This phenomenon has been observed widely in economic literature. See, for example, *The Exchequer Effect of the 50 per Cent Additional Rate of Income Tax*, HM Revenue and Customs, March 2012, nationalarchives.gov.uk, which also synthesizes evidence from prior literature on the topic.

[45] For more details, see "Base Erosion and Profit Shifting," OECD, oecd.org.

[46] For example, in the recent Federal Court case of *Cameco Corporation* (2017 FC 763), CRA's demand to interview 25 individuals was held to be unreasonable.

[47] *Report 2—Income Tax Objections—Canada Revenue Agency*, Office of the Auditor General of Canada, [illegible] oag-bvg.gc.ca.

[48] For example, in the recent Tax Court case of *Sifto Canada Corp.* (2017-TCC 37), CRA assessed the taxpayer in a manner inconsistent with a "competent authority" agreement it had entered into. The Court decided CRA was required to abide by its agreement. There are also a number of cases where CRA has negotiated settlement agreements only to then decide not to abide by such agreements.

[49] Similar to the nine-member panel that constituted the 1996 Technical Committee on Business Taxation.

[50] "Small and Medium-Sized Businesses Struggling to Grow: BDC Study," Business Development Bank of Canada, September 20, 2016, bdc.ca.

[51] Calculated from data provided in *Key Small Business Statistics*, Innovation, Science and Economic Development Canada, Small Business Branch, June 2016, ic.gc.ca.

[52] Goss Gilroy Inc., *Evaluation of the Digital Technology Adoption Pilot Program*, National Research Council, May 24, 2013, nrc-cnrc.gc.ca.

[53] See, for example, *Advisory Boards: An Untapped Resource for Businesses*, Business Development Bank of Canada, March 2014, bdc.ca; Y. Kamyabi and S. Devi, Use of Professional Accountants' Advisory Services and Its Impact on SME Performance in an Emerging Economy: A Resource-Based View," *Journal of Management and Sustainability*, Volume 1, Number 1, September 2011, available at citeseerx.ist.psu.edu; Sarah Dimick, "Three Lessons for SMEs Adopting Technology," Conference Board of Canada, December 9, 2013, conferenceboard.ca.

[54] "2017 Annual Report," Business Development Bank of Canada, Accessed November 15, 2017, bdc.ca.

[55] "British Columbia's Small Business Roundtable: 11th Annual Report to Government", British Columbia's Small Business Roundtable, 2016, smallbusinessroundtable.ca.

[56] Daniel Seens. [illegible] *Canadian Exporters*, Government of Canada, January 2015, ic.gc.ca.

[57] World Trade Organization, "WTO Upgrades Forecast for 2017 as Trade Rebounds Strongly," news release, September 21, 2017, wto.org.

[58] Value was measured by the increase in company equity.

[59] Howard Solomon, "Canadian SMEs Urged to Go Digital," *IT World Canada*, October 29, 2014, itworldcanada.com.

[60] The United Kingdom is considering this kind of program. The October 2017 *Made Smarter* report—a review of technology adoption in the United Kingdom by a conglomerate of industrial leaders—recently recommended a similar program, arguing that [illegible] help foster. For more, see the report at gov.uk.

[61] Goss Gilroy Inc., Evaluation of the Digital Technology Adoption Pilot Program.

Annex E – *Learning Nation:*

Equipping Canada's Workforce with Skills for the Future

LEARNING NATION:
EQUIPPING CANADA'S WORKFORCE WITH SKILLS FOR THE FUTURE

ADVISORY COUNCIL ON ECONOMIC GROWTH
December 1, 2017

Global labour markets are undergoing massive change, driven in large part by advances in technology. Increasing automation and the rise of the so-called gig economy are displacing existing jobs while creating new jobs that demand different skills, and changing the trajectory of our working lives. The scope and scale of these shifts are unprecedented and will deeply affect the lives of working Canadians. We estimate that by 2030, automation and changes in existing occupations could threaten the jobs of more than 10 percent of Canadian workers unless they acquire new skills.

Canada's skills development infrastructure is simply not equipped to meet the challenges that lie ahead. Our system today rests primarily on two pillars. The first one supports the development of skills before people enter the workforce, through K-12 and post-secondary education. The second pillar supports individuals when they leave the workforce, by providing assistance to the unemployed and the retired. That leaves a large gap in institutional support and training during Canadians' most productive years—and it is in this phase that workers will be most affected by the labour market turmoil. While our system has served us well in a relatively stable environment to date, it is not set up to address the coming labour-market disruptions.

Canada urgently needs a third pillar that focuses on supporting working adults. The Council anticipates that managing the expected labour market changes will require an additional $15 billion of annual investments in adult skills development. The magnitude of the coming changes also necessitates the development of a Skills Plan for Working Canadians that will guide Canada's approach to assisting working-age adults in capturing new occupational opportunities. We recommend that the government[1] create the Canada Lifelong Learning Fund, which would support and provide incentives for both individuals and employers to significantly increase their investments in skills development. At the same time, we urge the federal and provincial governments to transform Canada's network of employment centres so they provide hands-on guidance to Canadians as they navigate the labour market changes brought about by technological change.

The federal and provincial governments have taken some initial steps toward building this third pillar through recent policy changes that bolster Canada's skills development ecosystem. While these changes are undoubtedly a move in the right direction, the Council believes that much more substantial changes are required—and required soon. It is time to fundamentally rethink how we equip Canadians for the work dynamics of the future. Meeting this challenge will require a system-wide approach, and active collaboration between employers, citizens, educational institutions, and governments. In essence, we must develop mechanisms that support Canadians on continuous learning journeys throughout their lives.

The Shifts Underway in the Labour Market

In some important respects, Canada's labour market rests on a strong foundation. The country ranks 13th in INSEAD's 2017 Global Talent Competitiveness Index, a gauge of 118 countries' ability to develop the skills they need to prosper.[2] The World Economic Forum places Canada 14th out of 130 countries in its 2017 Global Human Capital Index, a measure of the knowledge and skills needed to create economic value.[3] We also have the highest proportion of working-age adults with post-secondary education (55 percent) in the Organisation for Economic Co-operation and Development (OECD), although Canada lags behind leading nations in granting advanced degrees.[4]

However, the world of work is changing rapidly. While this upheaval will present opportunities for many Canadians and Canada's economy as a whole, it will also create significant pressures, made all the more

difficult by the rapid pace of the change, its impact on multiple sectors at once, and the convergence of diverse technologies. As Erik Brynjolfsson, Director of the Initiative on the Digital Economy at MIT, observes, "Millions of jobs will be eliminated, millions of new jobs will be created and needed, and far more jobs will be transformed."[5] New technologies are enabling more extensive automation, which is projected to replace many of the tasks currently performed by humans across all areas of the economy. At the same time, a wave of innovations will create new positions, but these will require different skills than the ones workers currently have. Meanwhile, full-time employment is increasingly giving way to independent work arrangements, which is putting pressure on Canada's skills development ecosystem.

Job loss due to rapid technological change. Nearly half of the paid work currently performed in Canada could be automated by technology that already exists or is being developed. Already, robots can build your car, take your lunch order, review your legal case history, sell you insurance, or examine your X-rays. By 2030, the growing adoption of automation is projected to displace nearly a quarter of tasks performed by Canadian workers (Exhibit 1). While some of those most affected will be able to find alternative opportunities in the same or related field, we expect that 10 percent to 12 percent of the workforce will face job loss and struggle to find new positions unless they acquire new formal qualifications.[6]

The occupations most at risk involve physical activities in highly structured environments—jobs often held by relatively low-skilled and often low-paid workers. For example, three-quarters of all tasks performed by truck drivers in the mining, oil and gas, and forestry sectors could be automated.[7] Leading mining companies such as Barrick Gold, Teck, Rio Tinto, and BHP Billiton are already experimenting with driverless trucks, robotic rock-drilling rigs, and trains that can be loaded, unloaded, and driven automatically.[8] Given the pace of technological change in most sectors of the economy, we can expect such job-threatening disruptions in numerous other industries in the years to come.

The impact of automation is not limited to relatively low-skill occupations. Advances in artificial intelligence (AI) are increasingly making it possible to automate complex cognitive tasks, putting jobs that require higher skill levels in jeopardy. Machine learning will also affect white-collar workers, particularly those who focus largely on collecting and processing data.[9] Even professionals with highly specialized skills will feel the impact. Earlier this year, for example, a team of scientists trained a machine to diagnose skin cancer with the same accuracy levels as qualified dermatologists.[10]

As automation and AI creep up the skills ladder from repetitive, manual tasks to cognitive and analytical ones, they will hollow out a range of "mid-skilled" professions and affect a large swath of the middle class. The challenge is exacerbated by the fact that labour conditions vary significantly across the country. Hence, as we argue in Box 1, "Jobs vs. skills: leveraging labour market information," detailed and timely data on regional labour-market shifts will be necessary to craft an effective response.

Of particular concern is the fact that technological innovations will heavily affect groups already under-represented in the labour market. As discussed in the Council's report, "Tapping economic potential through broader workforce participation," there is an economic and social imperative to raise workforce participation among Indigenous people, lower-income workers, women with young children, Canadians over the age of 55, and persons with disabilities. That task will become all the more difficult as technology replaces many of the jobs people in these groups currently perform. For example, the World Economic Forum projects

Exhibit 1 **Nearly a quarter of all current work activities in Canada could be displaced by automation by 2030**

Industry	Technical automation potential and expected adoption by 2030: Expected automation adoption by 2030[1]	Technical automation potential[2]	Employment (2016), million	Average annual earnings per employee (2016), $ thousands
Transportation and warehousing	33%	61%	0.9	53
Manufacturing	32%	61%	1.7	57
Accommodation and food services	30%	55%	1.2	19
Mining	28%	52%	0.2	106
Agriculture, forestry, fishing, and hunting	28%	52%	0.4	58
Construction	22%	51%	1.4	63
Retail trade	24%	49%	2.0	29
Wholesale trade	21%	46%	0.8	60
Other services (except public administration)	24%	45%	0.8	41
Utilities	24%	44%	0.1	91
Finance and insurance	23%	42%	0.8	66
Administration and government	22%	41%	1.7	64
Real estate	22%	41%	0.3	51
Arts, entertainment, and recreation	22%	40%	0.3	68
Information	21%	38%	0.4	68
Professional, scientific, and technical services	19%	35%	1.4	69
Healthcare and social assistance	17%	33%	2.3	45
Educational services	17%	30%	1.3	53
Total	23%	45%	18.1	53

[1] Percent of work activities in the sector expected to be automated by 2030
[2] Percent of work activities in the sector with potential for automation given current technology.

Source: McKinsey Global Institute, Statistics Canada

that the global job-loss rate among women will be double that of men over the next five years as automation heavily disrupts office and administrative roles that are largely filled by women (Exhibit 2).[11] Employment and Social Development Canada (ESDC) forecasts that the position of administrative assistant will see the fastest decline in employment over the coming decade.[12]

Exhibit 2 **Top and bottom 10 occupations by employment growth, 2015–2024**

	Occupation	Projected average annual employment growth (2015–24)	Jobs (2014), thousand
Fastest growing	Specialist physicians	2.6%	38
	Database analysts and data administrators	2.4%	30
	General practitioners and family physicians	2.4%	53
	Chefs	2.1%	60
	Computer and information systems managers	2.0%	56
	Nursing co-ordinators and supervisors	2.0%	21
	Physiotherapists	2.0%	27
	Information systems analysts and consultants	1.9%	175
	Computer engineers (except software engineers)	1.9%	23
	Social and community service workers	1.9%	14
Fastest declining	Printing equipment operators	−0.7%	18
	Papermaking and processing machine operators	−0.8%	17
	Managers in communication	−0.9%	12
	Other sales related occupations	−1.0%	36
	Industrial sewing machine operators	−1.1%	16
	Printing press operators	−1.3%	26
	Electronic service technicians	−1.5%	60
	Service station attendants	−1.5%	15
	Administrative assistants	−3.0%	113
	Fishing vessel masters and fishermen/women	−3.0%	11

Source: Canadian Occupational Projection System (Employment and Social Development Canada)

New opportunities requiring new skills. History has long shown that innovations supplanting existing jobs tend to create new positions, often in entirely new sectors.[13] For example, while desktop publishing largely made typesetting jobs obsolete, it created entirely new career paths in digital design, more than offsetting any job losses. The same pattern continues today, but at a faster pace. "Sixty-five percent of today's grammar school kids will end up in jobs that don't even exist today," Cathy Engelbert, CEO of Deloitte, recently told *Fortune* magazine's Most Powerful Women Summit.[14] One-third of new jobs created in the United States in the past 25 years were in industries that were not around before or existed in very different forms, such as mobile app development. In short, the net impact of technological advances on employment can be strongly positive.

Additionally, innovation often enables new forms of entrepreneurial activity. Digital technology has introduced e-commerce platforms that have helped countless small businesses reach new customers, often in distant markets. It has also given entrepreneurs access to previously unimaginable productivity-enhancing solutions.

As machines take over more tasks, jobs performed by people will increasingly entail interacting with these machines and complementing their work. For example, with automated systems increasingly performing routine medical diagnoses, doctors can devote more time to interacting with patients and their families, tracking patients' mental health, or conducting medical research. But in many cases, people will need to develop new capabilities to take advantage of emerging opportunities. Digital skills, for example, remain in short supply in many segments of the workforce today, a problem that will become increasingly severe as jobs in the digital economy soar in the coming years.[15]

Many of the new jobs will also require relatively high levels of "soft" skills,[16] be it to manage and develop talent, interact with stakeholders from diverse cultural and social groups, or find creative solutions that go beyond simple analytical thinking.[17] These skills tend to fall into the categories of social and emotional intelligence, critical thinking and problem solving. Investing in their development will help workers gain resilience and adapt more easily to a shifting labour market that increasingly demands them. Between 1980 and 2012, jobs requiring high levels of social interaction grew by nearly 12 percentage points as a share of the US labour force, while math-intensive but less social jobs—including many STEM (science, technology, engineering, and math) occupations—shrank by 3.3 percentage points over the same period.[18]

In short, while addressing the displacement of workers in traditional jobs is a major concern, Canada must equally focus on preparing its workforce to take advantage of new opportunities that will be created in emerging sectors. This means strengthening our K-12 and post-secondary education systems to teach both specialized and soft skills, thus building a strong platform for further skills development (see Appendix 1). The fundamental goal must be to foster a dedication in all Canadians to continuous learning throughout their lives.

New patterns of work. Technology is also transforming traditional employment patterns, a development that in turn will require different approaches to training. In the past, people often worked for a single employer throughout their careers. Now and in the future, most will have several employers or even careers during their working lives. This presents a particular challenge for the growing ranks of older workers whose jobs are displaced—they may need to learn new skills only a few years before retirement or face the prospect of unemployment or a significant reduction in pay, responsibilities, and job quality.

The decline in long-term employment is happening in parallel with the rise of independent work.[19] In developed countries, the growth of digital platforms such as Uber and Etsy has served as an enabler of the gig economy. Today, the proportion of working-age adults engaged in freelance or contract work hovers between 20 percent and 30 percent in the United States, the European Union, and Canada.[20] While 70 percent of these individuals choose to work as independent contractors, the rest do so out of necessity.[21] Contract workers' livelihoods are often precarious, especially in fields where high competition forces them to set their rates below what they consider fair. Many work very long hours at high intensity and to tight deadlines to avoid saying no to assignments and risking the loss of clients.[22] Independent contractors are also at a disadvantage in keeping up with skills demanded by a changing labour market, as most lack access to employer-led training programs.

Collectively, these trends raise a series of critical questions. How can Canada equip its citizens with the skills to take advantage of the new opportunities the technology shifts are creating? How can it support those buffeted by waves of workforce transformation? And, of equal importance, how do we help forge inclusive economic growth amidst the turmoil? How do we urgently develop a strategic national response that will equip Canadians with the skills required to succeed in the new economic environment throughout their working lives?

In the short and medium term, it is working adults who will bear the brunt of the disruption's impact. Over time, inaction would seriously damage Canada's economic stability and social cohesion. Given current trends, the labour-market changes may lead to roughly two million Canadian workers—more than 10 percent of today's workforce[23]—losing their jobs by 2030, and lacking the prospect of finding alternative employment unless they move to a new field requiring new skills. Government policy (including tax exemptions and transfers) could help protect many citizens from the effects of job loss and flat or falling incomes. That said, job quality and income earned from employment have a strong effect on individuals' sense of self-esteem. What is more, growing income inequality can undermine social trust and be a harbinger of intolerant attitudes.[24] Therefore, relying solely on taxes, transfers, and the social safety net to absorb the impact of the labour-market shifts could not only place a major strain on government budgets but also undermine Canada's social fabric.

Global Experiments to Address Labour Market Disruption
Canada is not alone in grappling with these dramatic labour-market shifts. Some countries around the world are developing new training systems and experimenting with novel ways of instilling resilience in their workforces. While few proven solutions have emerged, some efforts point to possible paths forward.

Labour market innovations are evident on three key fronts: in gathering and analyzing data on the skills needed for the future economy, in developing diverse training models, and in finding ways to support and finance the upgrading of working adults' skills.

1 Tracking evolving trends and needs
A nuanced understanding of current and future skills demand can improve job and skill matching, help target educational and training programs, and empower individuals to make better-informed choices for their careers. The Council believes that the existing government efforts and the proper implementation of the FutureSkills Lab (an initiative we recommended in February 2017) is a step in the right direction as Canada tries to harness the potential of reliable and timely labour market information (See Box 1, "Jobs vs skills: leveraging labour market information"). The report "Ideas Into Action: A Review of Progress Made on the Recommendations of the Advisory Council on Economic Growth" that we are publishing alongside this report provides more information on these efforts.

2. New Approaches to Adult Training
The Council recognizes that numerous efforts are underway at educational institutions to develop curricula and delivery methods that help working adults adapt to the changing needs of the economy. Our post-secondary education institutions already support the development of skills by working-age adults. Colleges and polytechnics offer wide-ranging education and skills training options for mid-career workers that both build resilience for those currently employed and assist with career transition and workforce redeployment for those who are not. Through their faculties of continuing education, most universities offer a wide range of programs that cater specifically to adult learners.

Some models being tested in Canada and abroad include:

- Shorter, modular, and part-time programs. A number of new programs allow adult learners to take only brief career leaves, which limits the income they forgo and thus addresses a top barrier to adult training. For example, the British Columbia Institute of Technology (BCIT) allows mature students with previous post-secondary experience to skip the first year of some programs and fast-track their degrees. Other post-secondary institutions are adding shorter certificate or continuing-education programs to meet the growing demand from adults seeking new skills. Online education start-up Udacity offers "nanodegrees": short programs focused on developing specific skills in data science, machine learning, mobile programming and other highly sought occupations. Students need only invest about 10 hours a week for six to 12 months, at a cost of about $200 per month. Nanodegrees are designed in collaboration with leading employers such as Google, Mercedes-Benz, or IBM and, if completed successfully, lead to formal credentials that have helped many participants secure jobs.[25]

Box 1

Jobs vs skills:
Leveraging labour market information

Several initiatives already collect and analyze Canadian labour market information with a focus on jobs. Statistics Canada gathers data on labour demand and supply by job category, as well as unemployment and workforce participation rates.[1] The Sectoral Initiatives Program, run by Employment and Social Development Canada (ESDC), supports industry in developing sector-specific labour market intelligence, national occupational standards, skills certification, and accreditation systems. And the recently established Labour Market Information (LMI) Council, initiated by the Forum of Labour Market Ministers, will work to improve local data gathering, standardize methods and terminology, and disseminate labour market information through a new, collaborative platform.[2]

In February 2017, the Council proposed the formation of a national, non-governmental organization that would focus singularly on the study and development of skills and capabilities rather than jobs.[3] As an arms-length organization, the FutureSkills Lab would be able to engage with all stakeholders in the skills development ecosystem and facilitate cross-sector collaboration. It could perform three core functions:

- Identify and interpret new sources of skills information: tracking labour market signals about future skills needs by amassing a portfolio of pilot program proposals, collecting digital market signals, supporting innovative labour-market information initiatives focused on employer expectations, and extracting and synthesizing emerging skills trends;
- Support innovative approaches to skills development: encouraging, identifying, and co-financing innovative pilot programs that address known skills gaps among workers of all ages, as well as post-secondary students and youth;
- Define skills objectives and guide governments and training-system participants in skills programming: rigorously measuring outcomes of forward-looking, targeted training programs and initiatives that gather skills information; identifying and disseminating best practices (nationally and internationally) to employers, as well as education and training organizations across Canada; and determining a set of skills objectives for the future.[4]

The FutureSkills Lab can serve as a catalyst or incubator for the wider ecosystem of skills-development players. Educational institutions and skills-training organizations could use its analysis of current and future skills requirements to refine their curricula and, with the lab's support, pilot innovative approaches to developing skills in high demand.

[1] "A new way to track the job market," *Statistics Canada*, Published April 19, 2017. statcan.gc.ca.

[2] "Labour Market Information Council Backgrounder," Forum of Labour Market Ministers, Accessed on November 1, 2017, flmm-fmmt.ca.

[3] Budget 2017 included the establishment of a similar organization with a budget of $225 million over the first four years and $75 million per year thereafter. "Building a Strong Middle Class: Budget 2017," *Government of Canada*, Tabled in the House of Commons on March 22, 2017, budget.gc.ca.

[4] "Building a Highly Skilled and Resilient Canadian Workforce through the FutureSkills Lab," *Advisory Council on Economic Growth*, February 6, 2017, budget.gc.ca.

- Stackable courses. Modular courses are most beneficial when they can be complemented with further training in the same or related field. In some cases, students can transfer the credits they have accumulated to other institutions where they continue building their skills base and potentially obtain a diploma or a degree. The Australian state of New South Wales has developed a "stackable" vocational education and training system, whereby workers' existing skills are measured and then built upon with new training modules. The Massachusetts Institute of Technology (MIT), meanwhile, has introduced MicroMasters programs: Students earn credentials for completing a set of online courses and examinations, and the most successful among them can pursue a full-time Master's degree at MIT or another university.[26]

- Online programs. Adult learners often find it difficult to combine campus based programs with family and work responsibilities. Many institutions now offer blended programs for adult learners that include in-person and online components. This approach not only gives students flexibility, but allows educational institutions to serve larger student cohorts at their facilities. Fully digital approaches are also being tried. The US Defense Advanced Research Projects Agency is experimenting with an interactive and adaptive "digital tutor system" to train new recruits for IT jobs. Students work with the system one on one, completing lessons and so ving related problems, and when the tutoring system judges them to have mastered the material, it moves on to the next topic.[27]

- Experiential training integrated with work experience. This method gives adult learners the confidence that the skills they acquire can be immediately applied in the workplace.[28] Red River College in Winnipeg, Manitoba, has worked in partnership with truck manufacturer Peterbilt to design and deliver a highly practical 12-week technician training program, which so far has helped all of its graduates secure jobs upon completing it. SAIT's MacPhail School of Energy in Calgary, Alberta, provides hands-on, skills-based, and technology-focused education for careers in the energy industry. It offers students "action-based learning" in centres of applied technology developed by industry partners such as TransAlta, BP, and Encana.[29]

- Certification for skills. Some programs recognize the skills students have acquired even if they have not earned traditional post-secondary degrees. Singapore has implemented a Skills Framework—co-created by employers, unions and governments—that defines existing and emerging skills needed for specific occupational roles and facilitates the recognition of skills acquired by maintaining a database of approved courses.[30] In Canada, the prior learning assessment and recognition (PLAR) program run by most polytechnics allows individuals with non-traditional education such as former and current Canadian Forces members to get formal validation of formal and informal learning they have previously engaged in. Thus, PLAR makes it easier for such mid-career individuals to transition to new occupations or get advanced placement in post-secondary programs.

While the focus of this report is training for working-age adults, Canada's schools, colleges, polytechnics, and universities need to be fully mobilized in the national effort to prepare the future workforce to succeed in a rapidly changing labour market. In Appendix 1, we outline a set of priorities to guide this collective effort.

3. New Models for Funding Adult Skills Development

As labour market disruption requires more and more workers to upgrade their skills, individuals, employers, and governments face a financing challenge. Innovative efforts to address this need range from ambitious employer-run programs, to collaborations between private and public sectors, to government-financed national strategies that involve all participants in the labour market.

Corporate programs. As global companies adapt their business models to address economic and technological changes, they create new employment opportunities requiring skills their existing employees may not have. Many are now experimenting with ways to upgrade their workers' skills to fill those and future positions.

AT&T's Workforce 2020 Program, for example, aims to ensure that its employees' skills will match the company's future needs. In 2013, the company realized that more than a third of its workers were in roles that the organization probably would not have in a decade. AT&T launched the program to identify the skills it will need and create a blueprint for sourcing those skills internally by retraining 100,000 employees for radically new jobs by 2020. Since then, the company has spent about $250 million annually on the program, including the launch of an online platform with career-planning tools, skills assessments, and skills mapping. Employees can use the platform to identify positions they are interested in, learn about the specific skills requirements, and find training options for acquiring those skills. The company has also realigned performance incentives to give more weight to in-demand skills, and partnered with Georgia Tech and others to provide low-cost, online learning. AT&T reimburses employees for the cost of training, but workers need to do it on their own time.

The company and its employees are already reaping benefits: As of May 2016, employees had taken more than 1.8 million emerging-technology courses, and last year AT&T filled more than 40 percent of its 40,000 job openings with internal candidates.[31]

Sector collaborations. Not all employers have the size and resources to provide training to their workers. For small and medium enterprises (SMEs), which represent the majority of Canada's businesses, collaboration with governments, larger companies, or non-profit organizations can get them closer to their goals.

For example, in 2001, the South Korean government set up an incentive program aimed at encouraging large companies to help their smaller partners and suppliers upgrade their workers' skills. The ultimate goal is to improve the productivity of workers in the country's SMEs, which account for more than 85 percent of all employees. The initiative subsidizes 80 percent of the cost of training programs offered by corporations to the SMEs in their value chain.

One participant, SK Telecom, shares its extensive eLearning library—which includes task-focused training modules as well as ones in leadership, values, and functional training—and offers more traditional training courses tailored to the specific needs of its SME partners. To date, SK Telecom has trained almost 210,000 people and believes its SME partners are more productive. It says communication and goodwill have also improved.[32]

Another example of a sector collaboration are Quebec's *mutuelles de formations*. These non-profit organizations assist their mostly SME members by connecting them to low-cost training options for their workers. The associations support businesses from a specific economic sector (*mutuelles sectorielles*) or within a given geographic area (*mutuelles territoriales*). For example, Forma Plus, a Montreal-based *mutuelle* with more than 150 participating SMEs and 7,000 combined employees, helps its members identify common learning and development needs, then procures training services cost-efficiently and seeks government funding if necessary.[33]

Palette, a rapid retraining and skill-matching platform currently being developed under the auspices of the Brookfield Institute, aims to facilitate industry-led training, thus helping small, fast-growing companies meet their skills needs. To do this, the platform would work with innovative companies to identify common high-demand job skills and support partnerships with training providers to create rapid, retraining programs.

Government strategies Some governments are developing comprehensive national strategies for upgrading workers' skills. These strategies include coordinating skills development frameworks and funding various programs, while still empowering individuals to take ownership of their lifelong learning journeys.

One of the most ambitious of such programs is SkillsFuture Singapore. Launched in 2016, it is a national initiative that supports continuous learning in response to the rapidly changing needs of the economy. The program targets all participants in the labour market: students, early-career employees, mid-career employees, employers, and training and education providers. It is funded through a special levy on employers of 0.25 percent of their total payroll cost.[34] The centrepiece is the SkillsFuture Credit program, which gives every Singaporean over the age of 25 a credit worth $500 that he or she can use to pay for training from a range of more than 18,000 government-supported courses. The credit does not expire and is topped up periodically during an individual's career. The aim is to make every student and worker the agent of his or her own learning path, free to choose the type of training they feel will help them reach their career goals, whether that means pivoting to a new industry or gaining specific hard or soft skills.

SkillsFuture includes a program specifically focused on adult skills upgrading. Through the Mid-Career Enhanced Subsidy, Singaporeans aged 40 and above can receive a subsidy of up to 90 percent on fees for approved courses. The strategy also tries to foster employer-led training through initiatives such as Earn and Learn, whereby the government co-funds structured job training provided by employers to recent graduates.

On the other side of the world, and on a more modest scale, the US State of Virginia has developed the New Economy Workforce Credential Grant that allocates US$7.5 million per year to co-funding non-credit training that builds worker credentials in high-demand fields. The program is designed to provide incentives for individuals to invest in upgrading their skills and for training organizations to provide high-quality courses that lead to recognized credentials. Students are required to pay one-third of the total cost of the program upon enrolment, with government co-funding provided according to a pay-for-performance model.

Box 2

Navigating labour-market change:
Skills, training, and career guidance

Given the rapid and often confusing changes in the labour market, individuals need expert advice to understand the changing conditions and emerging opportunities. Several countries are trying new approaches on this front.

The German Federal Employment Agency, for example, recently began a pilot for a lifelong vocational counselling program, aimed at supporting workers at every key decision point from secondary school onward. The program targets about four million people, or roughly 5 percent of the population. It uses a combination of face-to-face consultations and online services, including a digital tool that guides participants to an efficient qualification- or skill-development track. Resources are particularly targeted to students pursuing degree programs with high dropout rates and workers at greatest risk of job loss as a result of automation.

The agency works directly with employers and has seen some impressive early results. During the program's first six months, more than 300,000 people used the digital service. SMEs, which often lack resources to invest in training, also have shown considerable interest in the counselling program.

The Gap in Canada's Adult Skills Development System

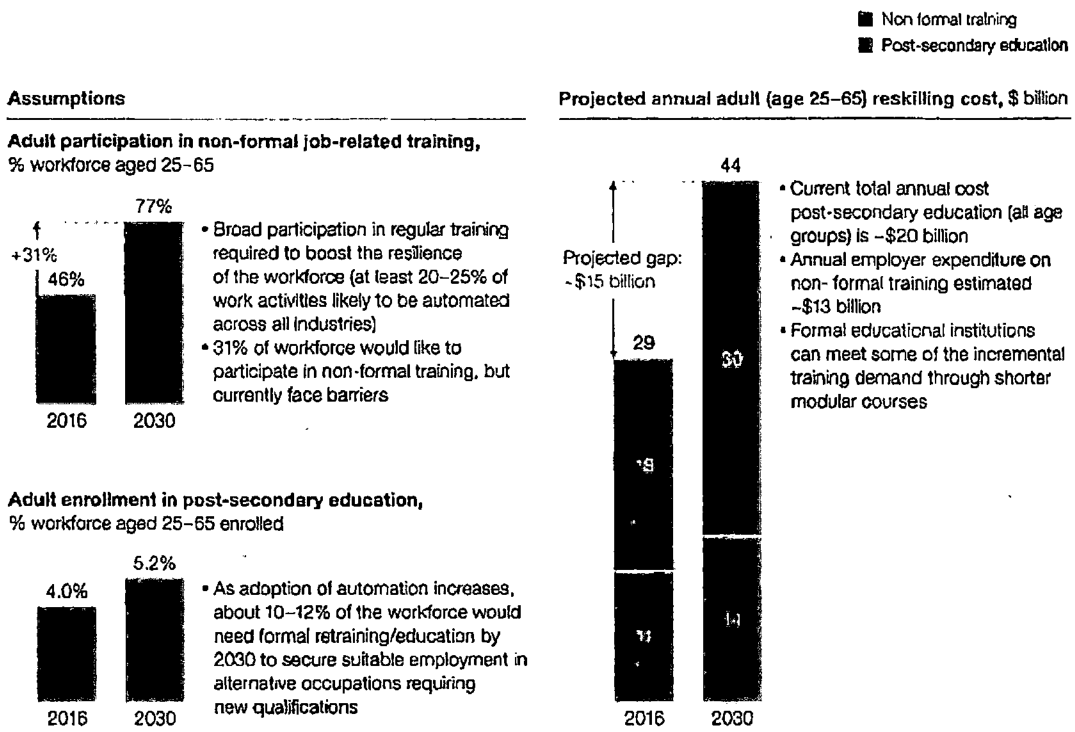
Canada's current workforce training infrastructure rests on two main pillars. First, the education system gives a foundation of broad knowledge and specialized skills before individuals begin careers. The total public expenditure on education (K-12 and post-secondary) amounts to more than five percent of Canada's gross domestic product, or approximately $100 billion annually.[35]

The system's second pillar—partially funded through Employment Insurance (EI)—provides Canadians who have lost their jobs with income support, as well as career guidance and training to help them find new opportunities.[36] It is reactive and exists largely to support individuals' re-entry into the labour market following unemployment. Federal funding for Labour Market Development Agreements (LMDAs), which cover training and guidance programs for unemployed individuals eligible for EI, is increasing from $2.2 billion to $2.5 billion annually.[37] The government is also broadening eligibility for LMDA-funded employment assistance services beyond EI-eligible unemployed individuals to also support employed workers. It is also increasing support for employers who need to upskill their workers to maintain their current employment.[38]

While each of these two pillars plays an essential role in the skills development system, they leave a big gap in institutional support for working Canadians. At a time of rapid labour-market change, our system does not sufficiently enable working adults to continually upgrade their skills.

To fill that gap, Canada must erect a third pillar. We estimate that the annual expenditure on training and post secondary education for working Canadians will need to increase by approximately $15 billion (Exhibit 3). Individuals, employers, and governments have to share in this critically important investment. Failing to make the necessary investments in the third pillar will prevent Canadians from taking advantage of new

Exhibit 3 **The annual cost of adult reskilling would need to increase by ~$15 billion to manage the effects of automation over the next two decades**



Source: OECD Education at a Glance, Statistics Canada, McKinsey Global Institute, Conference Board of Canada, ESDC, Budget 2017

opportunities, leading to severe consequences for their families' wellbeing and the overall growth prospects of the country's economy.

The funding increase is needed to address some severe shortcomings in the current system. The average working-age Canadian receives the equivalent of just one week of job-related training annually, or 41 hours. That figure exceeds the OECD average of 36 hours, but significantly trails some leading peers such as Denmark, New Zealand, and Norway. What is more, this training is not evenly distributed among the population. Only 46 percent of working-age Canadians participate in job-related training at all. Additionally, 31 percent say they want to participate in training but are facing barriers, most significantly insufficient time due to work or family commitments, high training cost, or lack of employer support.[39]

The additional investment will allow broader access to job-related training, and increase the share of working-age Canadians who participate in training each year from fewer than half to more than three-quarters. Thus, it

would accommodate the 31 percent of Canadians who have the desire to upgrade their skills but face barriers. Expanding training access is critical given the expectation that nearly a quarter of typical work activities will be automated by 2030 across most occupations.[40] Additionally, the boost in investment would cover the cost of raising the number of working-age adults enrolled in post-secondary institutions from about 660,000 a year to about 860,000—a 30 percent increase.[41] This would meet the needs of the approximately two million working adults who will have to acquire new qualifications and seek employment in new fields after their jobs are displaced by technological change.

With its recent reforms, the federal government has taken some initial steps toward providing the necessary support to working Canadians (Appendix 2). However, while these changes are undoubtedly important and headed in the right direction, they will not be sufficient to address the march of technological change and its rapidly growing impact on the labour market. A growing rate of job turnover means that a much wider group of adults will need to continuously upgrade their skills and acquire new qualifications throughout their working lives. While the government has to lead the way with a national strategy, employers and individuals both have important roles to play.

The role of employers For some time, Canadian employers have been significantly underinvesting in worker training. Between 1990 and 2010, the average amount an organization spent per employee fell by more than 40 percent.[42] In the past five years, that trend has reversed direction, with spending growing from a low of $688 per worker in 2010 to $800 in 2014-15, but Canadian companies still lag behind their US peers.[43] Mid-career employer-sponsored training has proven returns though. Carleton University economists have demonstrated that enrolment in such programs in Canada tends to boost employees' wages by five to nine percent and that this positive effect on wages is even stronger among low-skilled workers (up to 15 percent).[44]

However, when employers invest in skills development, they prioritize the professional development of their higher-skilled and more senior staff. Managers, supervisors, and professional, technical, and scientific personnel account for about 70 percent of the average training budget, and receive much more intensive training than employees with lower qualifications.[45] This is concerning, as it is the lower ranks of the workforce who are most in need of skill upgrades and could benefit the most from training.

SMEs, which employ about 70 percent of all private-sector workers in Canada, often lack the resources to develop internal training programs. They also face relatively high employee turnover, which discourages them from investing in staff training.[46]

As labour market pressures mount, it will become increasingly clear to organizations that they have a deep interest in developing their workers' skills. Business leaders must view training not simply as a cost, but as an investment in their organizations' human capital. In the knowledge economy, such investments are at least as important as those in equipment, physical structures, or intellectual property, as it is human talent that will underpin companies' future competitiveness.[47]

The role of individuals A significant number of Canadians, representing about 4 percent of the working-age population, are enrolled in educational institutions each year—a relatively high percentage given that most individuals pursue post-secondary degrees before the age of 25.[48] However, the rapid changes in the nature

of work may require many more Canadians to seek new formal qualifications. This is a difficult adjustment for most adults, especially when they have pursued a single career path so far. Therefore, helping people make informed choices about further education and training is critical for their future success in the workforce.

Provincial governments run employment centres (funded in part by LMDAs) that have traditionally offered job-counselling services to unemployed Canadians. These services can also benefit employed individuals whose jobs are at risk and who need to prepare themselves for a career change. Under recent reforms, employment centres will be able to extend their assistance to people who are not EI recipients. However, to serve working Canadians effectively, these counselling services must be redesigned to focus not only on helping someone find employment but also advise a wide range of citizens on high-impact training and new career options.

An additional obstacle for individuals who decide to pursue education or training is that most programs are not tailored to the needs of working adults. The programs often require students to take more time off than their circumstances permit, or do not provide sufficient opportunities to develop immediately marketable skills.

It is critically important to raise awareness among Canadians that they will need to continuously upgrade their skills if they are to remain competitive in a changing labour market. While government and employer assistance is necessary, this is a challenge individuals ultimately must take into their own hands.

Our Recommendation: Skills Plan for Working Canadians

In light of the pace, magnitude, and breadth of the coming labour-market shifts, Canada's leaders—representing governments, employers, workers, and educational institutions—need to engage in an urgent national dialogue on the best ways to prepare the country for the future of work. The objective of this process should be the development a comprehensive Skills Plan for Working Canadians that will fundamentally transform the system for upgrading the skills of working adults.[49]

To provide a starting point for this national discussion, the Council offers two ideas that could compose the central elements of the strategic response the country needs:

1. New, federally governed Canada Lifelong Learning Fund (CLLF) that helps reduce the financial barriers to continuing training for adults by co-funding investments both employers and individuals make in skills development;

2. Transformation of the government's employment centres into hubs of hands-on career and training guidance not only for the unemployed but also for working adults and employers.

The Council acknowledges the continuing need to help unemployed Canadians return to the labour market through the multi-jurisdictional architecture of the Labour Market Development Agreements (LMDAs). We also recognize that the government is already providing some skills-development support to working adults through the provincially administered Workforce Development Agreements (Appendix 2). However, incremental programs will not be sufficient to address the major looming need for adult retraining.

While the existing mechanisms represent a basis upon which to build a third pillar, we believe that the federal, provincial, and territorial governments should re-examine, reinforce and reinvigorate these efforts through the lens of a comprehensive Skills Plan for Working Canadians.

We believe the Skills Plan for Working Canadians should consider several guiding principles:

- Broad conversation and national commitment. The strategy needs to emerge from a broad conversation with all key stakeholders in the skills development system—a discussion that will raise awareness of the challenges ahead and help forge a commitment to step up investment in this national priority.

- Joint effort. An issue of this scale cannot be addressed by just one level of government. Both federal and provincial participants must play a role in the formulation and execution of the new plan.

- Innovative and agile programs. The strategy should accommodate the testing of innovative interventions, adopting, and scaling up effective ones and discontinuing less successful ones.

- Prioritization of highest need. The plan should pay special attention to sections of the population with the greatest need of assistance. For example, individual training grants should prioritize lower-income Canadians. Similarly, CLLF co-funding for employee training should focus on industries undergoing significant transformations and on SMEs that lack the resources to run their own employee-training programs.

- Tailored training approaches. Most existing training is not well-suited to working adults' circumstances, so governments should promote new mechanisms and curricula tailored to adult learners. In particular, the plan should encourage beneficiaries of CLLF support to enroll in courses that are modular or part-time, offer transferable credits, combine work experience, rely on digital tools, and lead to formal credentials.

- Seamless access. To encourage more employers and individuals to invest in skills upgrading, governments should simplify the programs through which they offer support and make it as easy as possible to apply for benefits. To achieve that, they should transform employment centres into customer-friendly services that guide both individuals and employers through the available reskilling options.

Bringing the Skills Plan for Working Canadians to life

The two initiatives the Council proposes incorporate the above principles, and illustrate the steps the government needs to take.

1 Formation of the Canada Lifelong Learning Fund. To motivate both individuals and employers to significantly increase their investments in skills development, the government needs to deliver a jolt to the system by providing financial incentives, while also encouraging new training practices for all industries, all ages and throughout the country. We believe that to achieve this, the CLLF would need to match the financing currently available for skills development through Labour Market Development Agreements, or about $2.5 billion annually.

Although the government is a key funder and strategic partner, the $15-billion annual gap in funding for adult training needs to be filled through a joint effort. To stimulate higher overall investment in skills development, CLLF funds should be matched at least partially by contributions of the beneficiaries (individuals and employers).

The types of interventions that the CLLF should support include:

- Co-funding employee-training initiatives by large companies undergoing major technological or business-mode transformations that require their employees to acquire new skills[60];
- Co-funding initiatives by SME consortia organized along sector or geographical lines to upgrade the skills of member companies' employees;
- Co-funding skill-development initiatives led by labour unions;
- Providing partial grants or loans to working adults who wish to enroll in programs that enable them to pursue new professional opportunities;
- Co-funding initiatives that allow working Canadians more time to engage in skills development, such as paid training eave.

Given the pace and scope of labour market change, the CLLF should function in an agile and adaptive manner, building on what works and accommodating an uncertain environment. We believe there is need for innovation not only in the design of adult skills-development programs but also in the way they are delivered. But time is of the essence; Canada cannot afford to engage in protracted negotiations to retool existing federal-provincial agreements.

2. Transformation of Canada's employment centres. These centres already serve as critical points of access for unemployed or vulnerable Canadians. The Council supports the government's efforts to expand the mandate of these centres. Given the level and breadth of labour market disruption, they should offer job counselling services not only to unemployed Canadians eligible for EI but also serve as hubs for career and training guidance to working Canadians weighing different training options and to employers looking to deploy new employee-training programs. The federal and provincial governments should work together to establish national best practices and performance standards for the centres. These reforms will make it significantly easier for both individuals and employers to access the advice and co-funding offered through the Skills Plan for Working Canadians.

The employment centres would build two national partner networks: one made up of businesses that have job openings, and the other comprising education and training providers that offer programs suitable for working-age adults. Following the reform, provincial employment ministries would administer the employment centres, as they do now, but they would use a shared performance management framework to ensure the highest possible standards.

It is vital that the advisory services the employment centres provide rely on deep and up-to-date research into the existing supply of skills and emerging needs across Canada's diverse labour market. The centres should not merely encourage more tra'ning but prioritize the development of skills in specific occupations or sectors with a high growth potential, conveying market information to employers and workers so they understand the opportunities and the value of investing in skills development.

A central role for Canada's new skills innovation lab. Canada's new skills innovation lab (referred to as "FutureSkills Lab" in our earlier recommendations) has a unique opportunity to play an enhanced role in the formulation and execution of the Skills Plan for Working Canadians. It can convene the national dialogue that Canada needs to determine how it will address the labour market disruption ahead. Given its expert staff, the lab would also be well-positioned to advise on high-opportunity areas where reskilling efforts under the CLLF umbrella should concentrate. It could also assess the impact of the activities under the CLLF umbrella to help determine which programs should be expanded and which discontinued.

◻ ◻ ◻

As businesses in nearly every industry strive to adapt to a rapidly changing global economy, the people who work for them must change, too—by acquiring the skills future work environments will demand. While Canadians and their employers need to be more proactive in the field of skills development—as they will be the primary beneficiaries of such activities—we believe the government should play a leadership role in helping both businesses and workers make the transition to this new world of continuous learning.

The labour market increasingly demands that people upgrade their skills throughout their working lives. To thrive in a future characterized by new jobs in new industries with new patterns of work, both employers and workers have to embrace investment in continuous learning. This focus is the cornerstone of the Skills Plan for Working Canadians—one of the key initiatives the Council believes is necessary to reach the goal of raising median pre-tax household income by $15,000 above current projections by 2030. Leaders in government, business, and the training ecosystem must stand behind a vision of Canada as a resilient learning nation so this new way of thinking enters the mainstream and becomes a national priority.

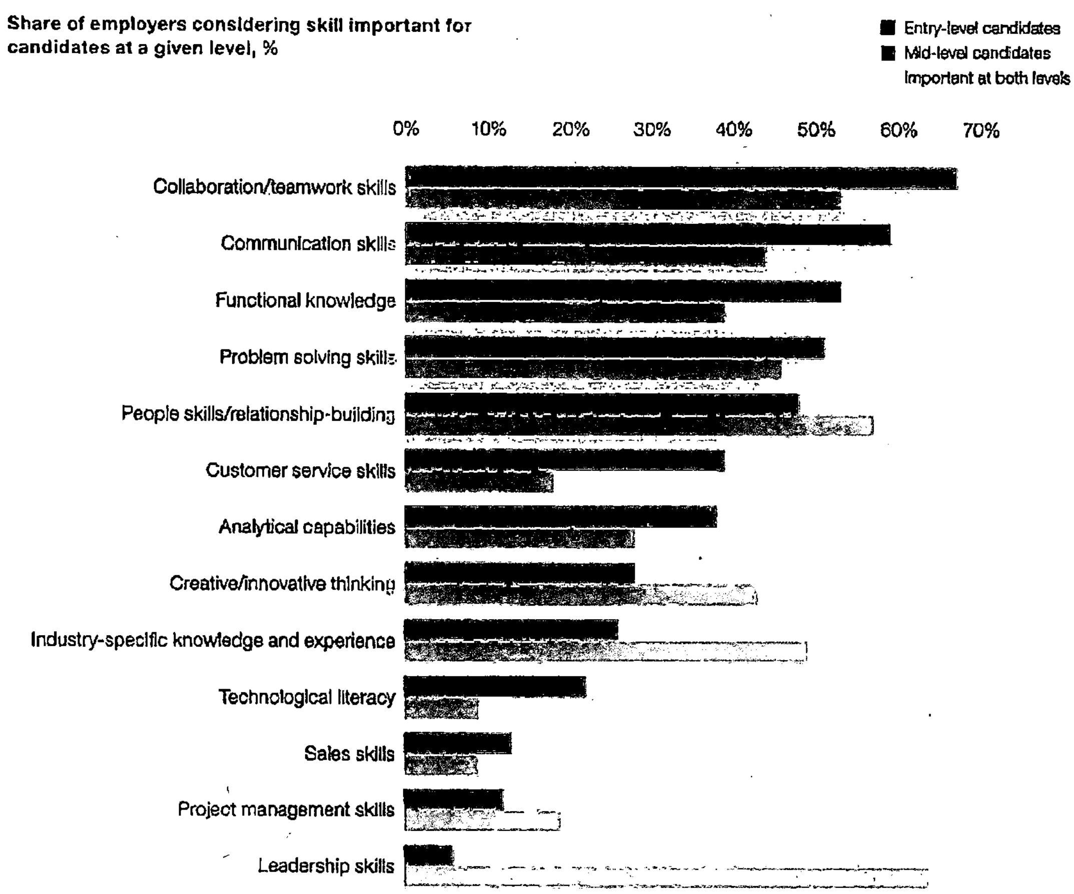
Confronting the major labour-market disruptions ahead means incorporating a third pillar into the current system of education and unemployment support: one focused on continuous upgrading of working adults' skills. It is a big challenge that will not be addressed overnight. Our recommendations today are a call to action and a sign of the urgency that we attach to this issue. We also recognize the complexity of the issue and note that initiatives of the magnitude and scope of the suggested Canada Lifelong Learning Fund would require careful policy design to ensure that the funds are effectively targeted and achieve the desired behavioural changes. We hope that our recommendations trigger an urgent national debate that involves governments of all levels, employers both large and small, and Canadians from all walks of life. This debate is necessary to find truly transformative solutions for building a workforce that is equipped to capture the opportunities of the future.

Appendix 1: Priorities for the Canadian Education System

Focus on transferable core and soft skills

While employers highly value core skills (such as math and science fundamentals) and soft skills (such as communication and problem solving), they are more likely to invest in strengthening employees' targeted, job-specific skills such as industry-specific knowledge (Exhibit 4). This makes it essential for our public education systems to focus on developing these foundational skills in the future Canadian workforce from an early age.

Exhibit 4 **Soft skills are among the most important for both entry- and mid-level job candidates, demonstrating the need for focus on them in education**



Source: "Developing Canada's future workforce: a survey of large private-sector employers," AON Hewitt (2016)

The good news is that educational institutions and innovators of all types are already working on new approaches to this education, with promising results.

- Actua is an Ottawa-based organization that runs a range of programs focused on advancing students' skills in science, technology, engineering, and mathematics (STEM), with an emphasis on groups under-represented in the workforce.

- Future Design School is a Toronto-based company that helps schools redesign their approach to teaching soft skills such as creativity, communication, collaboration, and problem solving. It reviews curricula, introduces new methodologies (such as project-based learning and experimentation), and supports teachers' professional development so they can apply the new approaches successfully.

- In addition to supporting an active cluster of work- and learning focused ventures, MaRS Discovery District, based in Toronto, provides entrepreneurial and innovation skills training (in person and online) to thousands of students and working-age adults—whether they are in transition between careers, employed by corporations, or working for start-ups.

- CORE Districts in California is one of the first experiments in making soft skills development central to the K-12 curriculum. Eight school districts in the state currently participate in the program, in which students' social-emotional skills (such as self-management, social awareness, self-efficacy and "growth mindset") account for 40 percent of a school's performance assessment. Analysis of the results to date suggests the scales the schools use to measure student skills are both reliable and positively correlate with key indicators of academic performance and behaviour.[51]

Prioritization of specialized academic knowledge, and fundamental and applied research

As Canada transitions to a knowledge economy, deep training in specialized academic disciplines will be critical to continuing innovation and success in a highly competitive global environment. Businesses in many critical sectors, including healthcare, next-generation manufacturing and advanced computing, will demand deep specialization as a source of competitive advantage, as will new knowledge-intensive start-ups.

Higher education institutions play a critical role in producing curious lifelong learners, who renew their knowledge on a regular basis as new developments in their fields emerge. Engaging in research and developing the associated skills is an excellent way of preparing for future learning. In addition, institutions should increase their offerings of short, specialized programs (certificates, professional executive graduate programs) that will allow working adults to return part-time and expand their skills to take advantage of emerging market opportunities.

Canada needs to boost the research intensity of its post-secondary institutions to remain competitive in advanced areas of the knowledge economy. More students, including undergraduates, should be exposed to research opportunities. The country should also set higher targets for the number of Master's and doctoral graduates while strengthening incentives for businesses to hire this specialized talent.

Vocational training that includes transferable skills

Training that builds applied skills is important to prepare students for vocational occupations. We underestimate the vital importance of this part of our educational system in Canada. However, programs that limit training to skills needed for a single vocation may leave students under-prepared for technological change.

Vocational education providers should continue to broaden the scope of their curricula to ensure that students learn skills applicable to a range of occupations. Many Canadian colleges and polytechnics have already started applying such broader competency-based frameworks.

The Foundation for Young Australians also offers an interesting model: rather than teaching skills for specific jobs, the not-for-profit organization promotes teaching these capabilities in "job clusters"—that is, groups of skills applicable to classes of jobs, such as technologists, artisans, or designers.[52]

The US State of California has tried to incorporate career and technical education[53] (CTE) into its education system, and there is evidence suggesting that such programs have a positive effect on students' career outcomes. Students completing CTE programs tend to have incomes 12 to 23 percent higher than their peers—a benefit that is particularly pronounced for programs in the healthcare sector.[54]

Emphasis on intensive practice in workplace environments

Many studies demonstrate the value of work-integrated learning. Moreover, a majority of young people find hands-on learning to be the most useful mode of instruction.[55] Partnerships between companies and post-secondary institutions are particularly effective at providing these types of hands-on learning opportunities while giving students access to needed equipment, facilities, and expertise. However, such collaborations are less common in Canada than in many other developed economies. One in five employers says that they never coordinate with educational providers and fewer than one in ten do so on a monthly basis.[56]

All participants in the skills-development ecosystem should increase the number and diversity of work-integrated learning opportunities for Canadians of all ages. The Canadian government has committed to encouraging work-integrated learning by supporting 10,000 work-integrated placements for post-secondary students through the not-for-profit organization Mitacs, helping students to gain experience and skills in the private sector. It also recently launched the Student Work-Integrated Learning Program, which will support partnerships between employers and post-secondary education institutions.[57] The Business Higher Education Roundtable (BHER), a partnership of Canada's largest companies and post-secondary education leaders under the auspices of the Business Council of Canada, is also advancing the cause by creating more sector-focused work-integrated learning opportunities for students.

Promotion of international educational experience

In an increasingly interconnected world, international education is not a luxury but a vital tool to equip Canadians for success. As the global centre of economic gravity shifts from west to east, Canadians who gain experience working with people from other cultures, especially from emerging markets, will have a crucial edge.

Canada needs a strategy for promoting global education, one developed by stakeholders beyond just educational institutions. Currently, only 11 percent of Canadian university undergraduate students participate in organized educational experiences abroad over the course of their degree, as opposed to 33 percent in France, 29 percent in Germany and 19 percent in Australia. What is more, Canadian students heavily favour traditional destinations, such as Europe, over emerging markets—only 3 percent of all students who went abroad in 2016 chose a Chinese institution.[58] The Study Group on Global Education recently recommended establishing Go Global Canada, a national initiative that would see 15,000 post-secondary students per year go abroad over the next five years, increasing that number to 30,000 per year within 10 years. The group also advocates a focus on emerging-economy destinations and targeted support for students from lower-income families and under-represented groups.[59]

Fostering a culture of life-long learning

Life-long learning habits need to be instilled early. As such, much of the responsibility for cultivating them lies with parents and the K-12 educational system. We believe that in light of the significant labour-force changes that lie ahead, Canada needs to undertake a comprehensive review of the K-12 education system to ensure we equip young people with the skills to thrive in the future workforce. Educational programs should embrace a variety of methods for encouraging students to be active learners, such as the use of more flexible curricula and a greater focus on projects that ask students to solve practical problems.

Universities, polytechnics, and colleges can also play a key role later in people's lives by engaging their alumni not only as passive supporters but as continuing students throughout their careers. Many professional programs already follow this model. Medical schools, for example, maintain active relationships with physicians, offering them opportunities to study advances in their fields, usually in partnership with relevant professional associations. Making our already strong post-secondary education system a core player in the new Skills Plan for Working Canadians will be critical to the strategy's success.

Appendix 2: Government Investment in Adult Skills Development

In recent years, the federal and provincial governments have recognized the need to improve its support for working adults as they adjust to the new world of work.

Education (first pillar). Approximately $5.5 billion of the federal and provincial governments' funding for post-secondary educational institutions goes toward the training of the 660,000 working-age Canadians enrolled in these schools.[60] The federal government provides additional support and incentives through the Canada Student Loans Program (about $769 million in loans and $241 million in grants to students aged 25 or above in 2015-16). It also offer the Lifelong Learning Plan, a program that allows individuals to finance their own or their spouses' full-time training or education by withdrawing money from their registered retirement savings plans (RRSPs), but has seen limited uptake since it was launched nearly 20 years ago.

In 2017, the federal budget allocated an additional $454 million over four years to providing adults who wish to enrol in further post-secondary education access to student loans and grants. As well, the budget proposed expanding eligibility for Canada Student Grants and Loans to part-time students and full- and part-time students with children, as well as the introduction of a three-year pilot project that will test new approaches to helping adult learners qualify for Canada Student Loans and Grants.

Support for the unemployed (second pillar) The government provides approximately $3 billion annually in funding to provinces and territories to deliver a range of training and employment programming for Canadians through Labour Market Transfer Agreements (LMTAs). Provinces and territories design and deliver the programs and services funded under these agreements to meet the needs of a wide variety of clients including unemployed workers eligible for EI, unemployed workers not eligible for EI, low-skilled employed workers, persons with disabilities, and older workers. In 2016-17, LMTAs included the following investments in skills development: $2.1 billion for LMDAs, $550 million for the Canada Job Fund Agreements, $222 million for the Labour Market Agreements for Persons with Disabilities, and $25 million for the Targeted Initiative for Older Workers.[64]

While the bulk of Canada's training and employment programming supports the unemployed (whether EI-eligible or not), Canada's approach has evolved significantly in recent years, expanding eligibility for support, streamlining existing transfer agreements and increasing funding.

The government is broadening eligibility for programs and services under the LMDAs to create more opportunities for Canadians to upgrade their skills, gain experience, or start businesses. Specifically, provincially run employment centres will be able to offer employment assistance services to all Canadians, not just the unemployed, and will provide support measures to employers who need to retrain their employees.[65]

Following stakeholder consultations and a comprehensive review conducted in collaboration with provinces and territories, the government announced that it is undertaking a significant reform of the LMTAs, including:

- Consolidating the existing Canada Job Fund Agreements, Labour Market Agreements for Persons with Disabilities, and the Targeted Initiative for Older Workers into Workforce Development Agreements that would make transfers to provinces and territories simpler and more flexible to meet the specific needs of individuals, workers, employers[66] in the region;

- Introducing rigorous performance management that will track the earnings and employment outcomes of individual participants.

The 2017 federal budget allotted additional investments in skills development programs, including an additional $1.8 billion over six years for LMDAs and an additional $900 million over six years for the new Workforce Development Agreements. ■

[1] Note that throughout the report, we use "the government" to refer to the Government of Canada.

[2] The Index measures a set of policies and practices that enable a country to develop, attract, and optimize the human capital that contributes to productivity and prosperity. Bruno Lanvin and Paul Evans, eds., "The G obal Talent Competitiveness Index, 2017," *INSEAD*, 2017, gtci2017.com.

[3] "The Global Human Capital Report 2017: Preparing people for the future of work," World Economic Forum, 2017, weforum.ent.box.com.

[4] [illegible] Therefore, Canada performs less well in terms of the share of graduates that have a masters or doctoral degree (9 percent versus 13 percent OECD average), and the successful placement of those graduates in the economy. Müge Adalet McGowan and Dan Andrews, "Skills Mismatch and Public Policy in OECD Countries," *OECD*, April 28, 2015, oecd.org.

[5] Emily Anthes, "The shape of work to come," Nature 550, 316–19 (2017). nature.com.

[6] [illegible] McKinsey Global Institute analy[illegible] market [illegible] the findings are consistent with the work of Frey & Osborne. Carl Benedikt Frey and Michael A. Osborne. "The future of employment: How susceptible are jobs to computerisation?" Technological Forecasting and Social Change 114 (2017): 254-80. oxfordmartin.ox.ac.uk.

[7] James Manyika, Michael Chui, Mehdi Miremadi, Jacques Bughin, Katy George, Paul Willmott, and Martin Dewhurst, "A Future That Works: Automation, Employment and Productivity," *McKinsey Global Institute*, January 2017. mckinsey.com.

[8] Tom Simonite, "Mining 24 Hours a Day with Robots," *MIT Technology Review*, December 28, 2016, technologyreview.com.

[9] Leonid Bershidsky, "Machines Can Replace Millions of Bureaucrats," *Bloomberg View*, February 9, 2017, bloomberg.com.

[10] Andre Esteva, Brett Kuprel, Roberto A. Novoa, Justin Ko, Susan M. Swetter, Helen M. Blau, and Sebastian Thrun, "Dermatologist-level classification of skin cancer with deep neural networks," [illegible] nature.com.

[11] "The Industry Gender Gap Women and Work in the Fourth Industrial Revolution," *World Economic Forum*, January 2016, www3.weforum.org.

[12] In the long term, jobs in growing sectors may counter declines in positions affected by automation, as is the case with healthcare services to ageing populations that are today predominantly performed by women. Neil Howe, "The Spread of the Pink-Collar Economy," *Forbes*, February, 28, 2017, forbes.com. Employment and Social Development Canada projects that healthcare and social assistance will be the industry with the second-highest employment growth in Canada between 2015 and 2024 (1.8 percent annually), trailing only Computer System Design Services (2.4 percent annually). "Canadian Occupational Projection System," Employment and Social Development Canada, Accessed November 1, 2017, occupations.esdc.gc.ca. This is the reason why a recent analysis by Patricia Meredith argues for policies to support the growth of the so-called "caring economy." Patricia Meredith, "Reforming the Income Tax Act to Drive Inclusive Prosperity and Support the Caring Economy," August 4, 2017, ourcommons.ca.

[13] Manyika et al, "A Future That Works: Automation, Employment and Productivity."

[14] Clifton Leaf, "A Day Without Manterruption," *Fortune*, October 10, 2017, fortune.com.

[15] Anthes, "The shape of work to come."

[16] Also referred to as "social and integrative skills."

[17] Manyika et al, "A Future That Works: Automation, Employment and Productivity."

[18] David J. Deming, "The Growing Importance of Social Skills in the Labor Market," *The Quarterly Journal of Economics* 132, vol. 4 (2017): 1593–1640, nber.org.

[19] Often referred to as freelance work, independent work has three defining characteristics – a high degree [illegible] task, assignment, or sales; and a short-term relationship between worker and client. James Manyika, Susan Lund, Jacques Bughin, Kelsey Robinson, Jan Mischke, and Deepa Mahajan, "Independent work: Choice, necessity, and the gig economy," *McKinsey Global Institute*, October 2016, mckinsey.com.

[20] [illegible] Canada [illegible] 2.9 million Canadians are self-employed, while [illegible] classified as temporary employees. Combined, these two groups make up over 20 percent of the Canadian workforce.

[21] Manyika et al, "Independent work: Choice, necessity, and the gig economy."

[22] Anthes, "The shape of work to come."

[23] Projections indicate that by 2030, as much as a quarter of all work activities in Canada are likely to be displaced by automation. [illegible] a substantial [illegible] or a related field [illegible] the [illegible] Michael Chui, James Bughin, Parul Batra, Ryan Ko, and Saurabh Sanghvi, "Jobs lost, jobs gained: Workforce transitions in a time of automation," *McKinsey Global Institute* [illegible] that about 10 percent of Canadian workers are in jobs at a high risk (over 70 percent) of being automated. Melanie Arntz, Terry Gregory, and Ulrich Zierahn, "The Risk of Automation for Jobs in OECD Countries," *OECD Social, Employment and Migration Working Papers*, No. 189, May 2016, oecd-ilibrary.org.

[24] Richard Dobbs, Anu Madgavkar, James Manyika, Jonathan Woetzel, Jacques Bughin, Eric Labaye, and Pranav Kashyap, "Poorer than their parents? A new perspective on income inequality," *McKinsey Global Institute*, July 2016, mckinsey.com. Eric Uslaner and Mitchell Brown, "Inequality, Trust and Civic Engagement," *American Politics Research* 31 (2003), russellsage.org.

[25] "Nanodegree Plus: Get a Job or Your Money Back," *Udacity*, Accessed on November 1, 2017, udacity.com.

[26] "MITx MicroMasters: Bringing MIT to you," *Massachusetts Institute of Technology*, Accessed on November 12, 2017, micromasters.mit.edu.

[27] Anthes, "The shape of work to come."

beneficial for employers. A study of Canadian apprenticeships found that employers get of $1.47 for every $1 spent on such training. "It Pays to Hire an Apprentice: Calculating the Return on Training Investment for Skilled Trades Employers in Canada," *Canadian Apprenticeship Forum*, 2009).

[29] "Action-Based Learning," *SAIT MacPhail School of Energy*, Accessed on November 5, 2017, sait.ca.

[30] "Skills Framework," *Skills Future Singapore*, Accessed on November 1, 2017, skillsfuture.sg.

[31] John Donovan and Kathy Benko, "AT&T's Talent Overhaul," *Harvard Business Review*, October 2016, hbr.org; Aaron Pressman, "Can AT&T Retrain 100,000 People?" *Fortune*, March 15, 2017, fortune.com; Thomas Friedman, *Thank You for Being Late: An Optimist's Guide to Thriving in the Age of Accelerations* (New York: Farrar, Strauss and Giroux, 2016).

[32] Dominic Barton, Diana Farrell, and Mona Mourshed, "Education to Employment: Designing a System that Works," *McKinsey Center for Government*, January 2013, mckinsey.com.

[33] "Leveraging Training and Skills Development in SMEs," *OECD*, 2012, oecd.org.

[34] "Skills Development Levy (SDL) System," *Skills Future Singapore*, Accessed November 1, 2017, sdl.ssg.gov.sg.

[35] "Government expenditure on education, total (% of GDP)," *The World Bank*, Accessed November 12, 2017, data.worldbank.org

[36] We note that there are several programs supporting employed working-age adults who are looking to upgrade their skills. These include the Canada Student Loans Program, the Canada Student Grants Program, the Canada Job Fund, the Labour Market Agreements for Persons with Disabilities, and the Targeted Initiatives for Older Workers (more information in Appendix 2).

[37] Transfers under the LMDAs are planned reach $2.5 billion by 2022-23.

[38] In addition to LMDAs, the Government transfers funds to provinces and territories under the Canada Job Fund agreements to design and deliver employment and training programs targeting non-EI eligible unemployed workers, low-skilled employed and employers, through programs such as the current Canada Job Grant. Note that the Canada Job Fund will soon to be consolidated with Labour Market Agreements for Persons with Disabilities and the Targeted Initiative for Older Workers into the new Workforce Development Agreements.

[39] "Education at a Glance 2017: OECD Indicators," *OECD*, Accessed November 1, 2017, oecd.org.

[40] Manyika et al, "Jobs lost, jobs gained: Workforce transitions in a time of automation."

[41] "Postsecondary enrolments, by program type, credential type, age groups, registration status, and sex," *Statistics Canada*, Table 477-0033, Accessed on November 1, 2017, www5.statcan.gc.ca.

[42] While part of the decline could be attributed to difficulty in aggregating spend data from different parts of the organization and the economic strategic choices surely play a role in, too.

[43] Simon Cotsman and Colin Hall, "Learning and Development Outlook 2015," *Conference Board of Canada*, December 2015.

[44] Wen Ci, Jose Galdo, Marcel Voia, and Christopher Worswick, "Wage Returns to Mid-Career Investments in Job Training through Employer-Supported Course Enrollment: Evidence for Canada," Institute for the Study of Labor Discussion Paper 9007, April 2015, ftp.iza.org.

[45] Ibid.

[46] Barton et al, "Education to Employment: Designing a System that Works."

[47] Amy Edmondson and Bror Saxberg, "Putting lifelong learning on the CEO agenda," *McKinsey Quarterly*, September 2017, mckinsey.com.

[48] "Postsecondary enrolments, by program type, credential type, age groups, registration status and sex."

[49] In a forthcoming book, Isabel Sawhill of the Brookings Institution proposes a "GI Bill for America's Workers," an idea that similarly focuses on mid-career skills development on a national scale. Isabel Sawhill, *The Forgotten Americans and the Dignity of Work* (Yale University Press, forthcoming, 2018)

of the Canada Job Grant program which co-funded employer-led training of 362,000 workers in 2014–15 (Employment and Social Development Canada data).

[51] Martin R. West, "Should non-cognitive skills be included in school accountability systems? Preliminary evidence from California's CORE districts," *Brookings Evidence Speaks Reports*, Vol 1, #13, March 17, 2016, brookings.edu; "Data-Driven Change: A School Community Champions Growth Mindset," *Core Districts*, Accessed on November 1, 2017, coredistricts.org.

[52] "The New Work Mindset: 7 New Job Clusters to Help Young People Navigate the New Work Order," *The Foundation for Young Australians*, 2017, fya.org.au.

[53] Career and technical education is the term commonly used in the United States to refer to vocational education.

[54] Ann Huff Stevens, Michal Kurlaender, and Michel Grosz, 'Career Technical Education and Labor Market Outcomes: Evidence from California Community Colleges," NBER Working Paper 21137, April 2015, nber.org.

[55] Barton et al, "Education to Employment: Designing a System that Works."

[56] Ibid.

[57] "Building a Strong Middle Class: Budget 2017."

[58] Rita Abrahamsen and Randall Hansen, "Global Education for Canadians: Equipping Young Canadians to Succeed at Home and Abroad," *Study Group on Global Education*, November 2017, goglobalcanada.ca.

[59] Ibid.

[60] "Financial Information of Universities and Colleges (For the Fiscal Year Ending 2016)," *CAUBO*, Accessed November 1, 2017, caubo.ca.

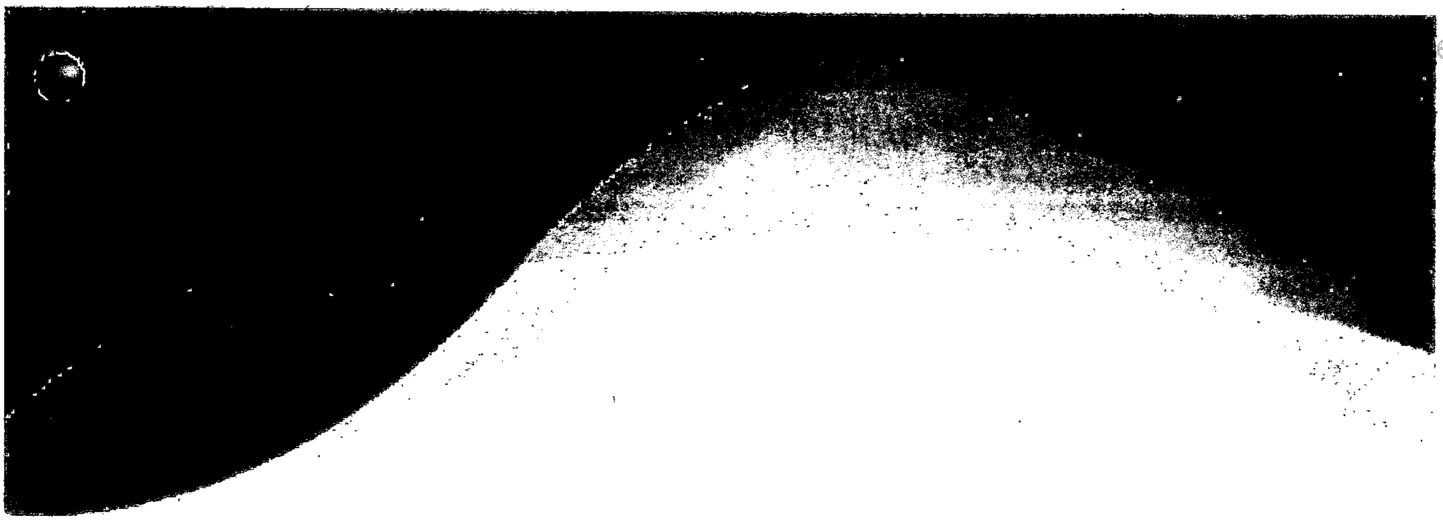
[61] Employment and Social Development Canada data

[62] "Building a Strong Middle Class: Budget 2017."

[63] Including under-represented groups such as Indigenous peoples

Annex F – *Ideas into Action:*

A Review of Progress Made on the Recommendations of the Advisory Council on Economic Growth



IDEAS INTO ACTION:
A REVIEW OF PROGRESS MADE ON THE RECOMMENDATIONS OF THE ADVISORY COUNCIL ON ECONOMIC GROWTH

ADVISORY COUNCIL ON ECONOMIC GROWTH
December 1, 2017

In early 2016, we embarked on our task with a few principles in mind. We sought to develop a small number (fewer than 12) of high-impact initiatives that will stimulate economic growth in Canada and raise median pre-tax household income by 2030 by $15,000 above current projections. We wanted to learn from others and draw inspiration from global best practices and case studies. We have tried to be bold and focus on implementation and impact. We aimed to release our recommendations in waves to fit the evolving priorities and focus areas of the federal government. And working iteratively with stakeholders and the public sector was important to us—in particular, we worked interactively with the Department of Finance Canada and other departments to help build support and prepare the ground for implementation.

With this in mind, in this memo we review the two previous rounds of recommendations, provide an update on their implementation, and highlight the next steps required to realize their full potential.

OUR FIRST WAVE OF RECOMMENDATIONS

In October 2016, we offered three recommendations, on infrastructure, foreign investment into Canada, and immigration.

1. Unleashing productivity through infrastructure

Investment in productivity-enhancing infrastructure—such as improving transportation of people, goods, energy, and data, or improving the urban environment—is a key enabler of economic growth. Each dollar of such investment brings 60 cents worth of additional economic activity in the short term and has a 20 to 50 percent return on investment in the long term. It is also an important driver of skilled and unskilled job creation; 15 jobs are created for every $1 million invested. Equally important, Canada faces a major infrastructure gap—anywhere from as "low" as $150 billion to as high as $1 trillion—that needs to be addressed.

We recommended developing a focused federal infrastructure strategy in line with the economic growth agenda of the Government of Canada (referred to as "the government" hereafter), and creating a Canadian Infrastructure Development Bank to leverage institutional capital and deliver over $200 billion worth of productivity-enhancing infrastructure projects over 10 years. Finally, we recommended that the government create a "flywheel" for reinvestment by catalyzing the participation of institutional capital in existing assets, and using this capital to multiply investment into new infrastructure.

Legislation to establish the Canada Infrastructure Bank received Royal Assent in June 2017, and the Bank is on its way to making $35 billion in infrastructure project investments. The government has moved quickly to recruit the Bank's leadership, appointing Jim Leech as a special advisor, Janice Fukakusa as the Bank's first chair, and 10 other members of the Board of Directors. The Bank is expected to be operational by the end of 2017.

Going forward, we believe that the government should focus on the principles that we laid out in the Canada Infrastructure Bank Implementation Memo. More specifically, we would emphasize the importance of three specific considerations as the bank is launched:

- Strive to keep the investment decision process independent from short-term political priorities;
- Seek out and not compromise on attracting top talent, especially for its executive ranks, and compensate them at competitive market rates;
- Focus on infrastructure projects that will enhance the productivity of the economy and drive growth. Examples include toll highways and bridges, high-speed rail, port and airport expansions, smart city infrastructure, national broadband infrastructure, power transmission, and natural resource infrastructure.

Beyond these considerations, the bank's first area of focus should be to build a pipeline of productivity-enhancing projects that have a strong potential of attracting private capital, move quickly to generate "quick wins," and educate other stakeholders (including provincial and municipal governments, and the financial and infrastructure-development sectors) on how to work with the Bank.

2. Bringing foreign investment to Canada

Our second recommendation was based on the conviction that foreign direct investment (FDI) is critical for driving growth, creating jobs, and integrating Canadian companies into global markets—but Canada is falling behind here. While OECD countries expanded their inbound FDI an average of seven percent annually since 2005, Canada's has grown only two percent a year—in 2016, Canada ranked 33rd out of 40 countries for FDI restrictiveness. We recommended a national FDI strategy and a world-class FDI agency to enable Canada to take a concerted approach to investment attraction—one that helps stimulate broad sectors of the economy and attracts the best investors available, those with both capital and knowledge.

Here too, Government moved quickly to establish a new federal body—the Invest in Canada Hub—and committing $218 million over five years to run it. The process of selecting a CEO is already underway and the Hub is expected to be operational by the end of 2017.

Going forward, we believe that the success of this new institution will depend on a number of success factors, and we would highlight three for consideration:

- Develop a clear strategic focus: the organization cannot be active in all sectors and should develop a clear strategy to promote those with greatest potential;
- Adopt a "customer experience" mentality: the Hub should operate a "concierge" service for investors, using personalized approaches;
- Invest in a coordinated approach with institutions at other levels of government: it should not act in isolation—it should coordinate with provincial and local development agencies and work with other federal departments.

We also encourage the government to educate the public on the potential benefits of the Hub, which include a short-term stimulus to GDP of over $40 billion and the longer-run effect of integrating more Canadian companies into global supply chains.

3. Attracting the talent Canada needs through immigration
Our third recommendation, on immigration, flowed from three deep beliefs. More than anything else, skilled and talented people are the critical driver of inclusive economic growth. Diversity and the ability to integrate skilled immigrants are rare and highly valuable Canadian attributes. And the strain of an aging population will soon create a need for more people to balance our "population pyramid" and maintain a high quality of life.

We recommended four specific actions to attract top talent through immigration and provide sufficient resources to integrate them into Canadian society:

- Gradually increase annual immigration from about 270,000 in 2016 to 450,000 over five years, with the objective of bringing in an additional 75,000 additional economic immigrants annually by 2021;
- Facilitate entry for senior and specialized talent by streamlining permanent and temporary entry programs to help high-growth and innovative companies get access to the managerial capacity and skills they need to scale and be globally competitive;
- Qualify more international students for permanent residency in order to tap into an already-integrated pool of young, educated talent;
- Improve national accreditation standards to help skilled immigrants access suitable productive employment opportunities.

On October 31, 2016, the government released the *2017 Immigration Levels Plan* which reaffirmed Canada's strong commitment to immigration by setting a target of 300,000 new permanent residents in 2017. This included a target to admit 172,500 economic immigrants per year, up from the 2016 level of 160,600, representing an increase of 7.4 per cent. The recently announced plan for 2018-2020 will gradually raise immigration levels from 300,000 in 2017 to 340,000 in 2020. While this is short of our recommendation, it is a step in the right direction. The plan calls for economic immigrants to form the bulk of the increase—such new Canadians are an important driver of growth.

A recent Conference Board report also concludes that increasing annual immigration levels would lead to faster GDP growth than current projections (2.05 percent versus 1.85 percent annually), as well as a better support ratio (number of working age adults per person aged 65 or more). However, it warns that to bear the fruits of a significant increase in immigration levels, Canada needs to address "long-standing labour market integration challenges that immigrants face" and actively build public support for immigration.

We encourage the government to take the necessary measures for bolstering the Canada's system for social and labour market integration and consider raising immigration levels further in subsequent years.

The government has taken action on the second recommendation by reforming the Express Entry points system and implementing a Global Skills Strategy in June 2017, which makes it easier for global talent to immigrate by setting a two-week standard for the issuance of visas and work permits. In response to our fourth recommendation, the government has adopted a Targeted Employment Strategy for Newcomers.

OUR SECOND WAVE OF RECOMMENDATIONS

In February 2017, we added five more recommendations to drive inclusive growth, by scaling innovation, unleashing the growth potential of six to eight high-potential sectors, developing skills for the future economy, boosting workforce participation, and positioning Canada as a global trade hub.

4. Unlocking innovation to drive scale and growth

Innovation is absolutely critical to Canada's future economic success. We found that Canadian companies are highly innovative but struggle to scale and commercialize these innovations, largely due insufficient access to talent and growth capital.

Our report in February 2017 included five specific ideas for Canada to help more companies scale up:

- "Double down" on a few innovation marketplaces where Canada has already developed organic traction;
- Create additional pools of growth capital, including a private-sector-led growth fund to support established high-impact firms and a matching fund to stimulate capital raising;
- Leverage government procurement to accelerate innovative companies by shifting from a requirements-focused to a value-based procurement system, thus transforming the government into a first customer for Canadian innovative solutions;
- Conduct a full review and rationalization of innovation-focused government programming;
- Increase companies' access to talent through targeted immigration policies (discussed in the previous section).

Below we expound on progress on our first four ideas below. With respect our last idea, the government has implemented a two-week fast-track visa program that aims to increase access to talent.

Catalyze the formation of business-led "innovation marketplaces"

Our first recommendation called for the government to catalyze the formation of business-led innovation marketplaces in areas where Canada has momentum and market participants need new solutions. It flowed from a belief that commercial innovation happens when innovators work alongside corporate customers to generate solutions to real commercial problems.

The government's Innovation Superclusters Initiative has the potential to catalyze innovation through a similar approach. The federal budget allocated $950 million in 2016 to fund up to five superclusters that the government will select by March 2018. Out of 50 applications, the government has so far selected nine finalists focused on the following fields: ocean economy in Atlantic Canada; artificial intelligence in Quebec;

mining and cleantech in Ontario; advanced manufacturing in Ontario; plant-based protein in Saskatchewan; digital technology in British Columbia; next-generation mobility systems and technologies in Quebec, Ontario, British Columbia and Atlantic Canada; smart agri-food in Alberta; and smart, sustainable, and resilient infrastructure in Alberta.

To get the most out of this investment, we encourage the government to incorporate three of the core tenets of our original proposal:

- Use a stage-gated funding approach and scale up clusters that demonstrate performance.
- Ensure significant private-sector leadership, investment and involvement;
- Use a data-driven and results-oriented selection and monitoring process.

Create additional pools of growth capital

Similarly, we were happy to see the private sector create the Canadian Business Growth Fund that will provide capital and support, including mentorship, to help Canadian start-ups reach scale. The Business Growth Fund was established by a consortium of Canada banks and insurance companies, which appointed Dale Ponder as independent chair and George Rossolatos as chief executive officer in October 2017. Above all, we would encourage the Growth Fund to remain true to two design principles that were proposed in our original recommendation:

- Remain focused on high impact firms in Canada in need of growth capital (do not be tempted to allocate capital toward lower-risk, more traditional sectors and companies);
- Offer support beyond capital, including value-added advice and networking opportunities.

The government's proposed Venture Capital Catalyst Initiative (VCCI) has the potential to improve the sustainability of the Canadian venture capital ecosystem and spur private sector investment. To do so, it would need to have access to a deep pool of experienced venture capital fund managers and establish a mentorship program for investee companies. The government has recently concluded a consultation with the wider investor community on the design of the initiative and we look forward to the announcement of the detailed implementation plan.

We would also strongly encourage some of the capital of VCCI to be allocated to the Council's recommendation of a matching fund, rather than be fully allocated through a fund of funds model.

Modify government procurement policy to incorporate strategic procurement

We have seen progress on strategic procurement as well. The government's 2017 budget allocated up to $50 million to launch a new procurement program, Innovative Solutions Canada, modelled on the U.S. Small Business Innovation Research program, which has proven results. In the Canadian program, federal departments and agencies will allocate a defined share of their spending on R&D, late-stage prototypes and

other goods and services to Canadian innovators and entrepreneurs. For its part, the government will enjoy the latest, most innovative products and services—"a true win-win for citizens and the businesses that employ them," the budget states.

The Council encourages all federal departments and agencies to commit a portion of their procurement budget to the program and looks forward to the announcement of the department-specific targets. We also believe that it is critical that the government publicly report on the results of the program, not only to ensure transparency, but also to build public awareness about this new opportunity. Finally, we continue to believe that Canada should use strategic procurement to drive inclusive economic growth by ensuring that businesses owned by underrepresented groups, such as Aboriginal-identified small businesses, are on a level playing field when it comes to accessing government contracts.

Review and rationalize government innovation programs

Our fourth innovation-related recommendation called for the optimization of Canada's many innovation programs to both improve access to support and achieve a better return on government investment. In May 2017, the Treasury Board Secretariat (TBS) launched the Horizontal Business Innovation and Clean Technology Review with the objective of simplifying programming and better aligning resources to improve the effectiveness of innovation programs. While the review relies on a rigorous methodology and is bringing much-needed transparency into the suite of existing programs, we note that it is conducted by the TBS, rather than a board chaired by an external expert, as we originally recommended.

The Council emphasizes the importance of acting on the takeaways from the review during the 2018 Federal Budget cycle. All government departments overseeing innovation programs should use its findings to focus their funds and efforts on a few larger "platform" programs with proven effectiveness. We also encourage the government to perform ongoing horizontal evaluations of its programming, and use a decision-making approach akin to that of a portfolio investor who allocates capital based on a target risk-return profile.

5. Building a highly skilled and resilient Canadian workforce through the FutureSkills Lab

Our overarching priority as a Council is to create opportunities for all Canadians to participate in an open and well-functioning economy. Our fifth recommendation, for a skills organization we called FutureSkills Lab, grew from two findings. Many Canadians currently lack the technical and other skills needed for the future economy, and technology is advancing so rapidly that these skills are sure to change. We concluded that more agility must be built into the system.

Rather than propose specific skills or endorse a particular course of training, the FutureSkills Lab is designed as an agile "test lab" that will discover and develop innovative training models over time, adding elements of flexibility and resiliency to Canada's complex education system.

We suggested three roles the Lab could play in enabling an agile skilling system:

- Find and finance innovative upskilling and reskilling pilot programs;
- Identify new sources of skills information (working with large private sector organizations, for example);
- Define skills and educational objectives in collaboration with governments and educational institutions.

We acknowledge the progress on these recommendations. Specifically, the government has allocated $225 million over four years to launch a new skills organization in 2018. It has issued a discussion paper to consult stakeholders on the mandate, functions, and governance of the new organization. We encourage the government to make the proposed organization a genuine innovation lab for new approaches to skills development that is nimble and agile in the face of the major changes underway in the labour market. In addition, the organization should serve as a centre of excellence with clearly defined channels for influencing skills development strategy and programming, while still sitting at an arm's length from existing government institutions and relying on an independent governance structure.

6. Unleashing the growth potential of key sectors

Our recommendation here evolved from Canada's need to focus its energies on areas where it has the right ingredients to be a global leader. To that end, we suggested that Canada identify six to eight high-potential sectors and move assertively to remove barriers, bring together the capabilities and resources available across the country, and unlock private sector growth. The idea is not to pick winners, but rather to raise our collective ambitions as other countries do the same.

With its 2017 budget, the government formed six Economic Strategy Tables, including advanced manufacturing, agri-food, clean technology, digital industries, health/bio-sciences, and clean resources. We broadly agree with these choices, and believe that the roundtables' focus on innovation, health, and sustainability will help drive long-term inclusive growth. As of November 2017, four of the tables' chairs have been appointed and two of the tables have already held their first meetings. All tables are expected to begin their work by the end of 2017.

To ensure success, each sector table should take several steps:

- Set a bold ambition and find ways to track progress;
- Draw inspiration from global case studies and success stories;
- Identify barriers to growth for each specific sector, as well as those that affect all sectors;
- Align on a few specific and ambitious initiatives to unlock growth in the sector.

The government has a critical role to play as well, by working collaboratively with the tables, moving quickly on recommendations, and using its full weight to support and champion the sectors (for example, through trade missions, regulatory changes, support services, and so on). The government should also act as a check and balance to ensure these sectors are in fact creating high-quality jobs and driving inclusive growth.

7. Tapping economic potential through broader workforce participation

Canada's economic-growth challenges are largely due to an aging population, which will be acutely felt given the country's historical reliance on an expanding workforce to drive GDP growth. In a "do nothing" scenario, Canada's GDP growth rate could fall to just 1.5 percent annually for the next 50 years.

With that context, we identified barriers that are slowing or stopping Canadians who want to work from fully participating. Four groups in particular require policy intervention to "level the playing field" and ensure they have the right incentives to work: women with children, older workers, lower-income and lower-skilled Canadians, and Indigenous people. Getting more people in these groups into work represents a huge growth opportunity for Canada. If the country could match the workforce participation rates achieved by leading countries, GDP per capita would rise by up to six percent.

The government has taken important steps to unlock growth for these groups. It has allocated new funding to support workforce participation by vulnerable groups (through steps such as reforms to the Labour Market Development Agreements, Workforce Development Agreements, Canada Student Loans and Grants, Canada Learning Bonds, and Employment Insurance). The government budgeted nearly $200 million in 2017 for Indigenous people to develop skills and enter the workforce, through initiatives such as the Post-Secondary Student Support Program and the Aboriginal Skills and Employment Training Strategy. It has made a significant investment in women and families, including $7.5 billion for childcare and support for women entrepreneurs; further, 2017 was the first year the federal budget included a gender-based analysis of budgetary measures. The government has expanded eligibility for student grants and loans to support lifelong learning by students who support families, as well as adults returning to school.

8. Positioning Canada as a global trading hub

Recent trade discussions highlight the importance of strong and diverse trade flows. We recognize that trade is both an imperative and an opportunity for Canada, given our history as a trading nation, our enviable geographic position, and our diverse population.

Our final recommendation in February 2017 entailed ways to better position Canada as a global trading hub in the context of rising waves of protectionism and shifting dynamics of global trade—a context that has become even more precarious in the intervening months, as NAFTA renegotiations have proved difficult and anxiety has risen about outsourcing and job dislocation. We suggested four steps for government to consider:

- Develop better and deeper trade links with large and fast-growing economies, particularly in Asia (China, India, Japan);
- Nurture and improve the North America trading relationship;

- Invest in trade infrastructure to improve access to global markets;
- Address disruptions from future trade flows, for example by helping workers to upgrade their skills.

We acknowledge the government's efforts to preserve and modernize NAFTA. However, given the unpredictability of these negotiations, we encourage it to also focus on building stronger links with other markets, in particular building on the relationships developed during the negotiations for the Trans-Pacific Partnership (TPP). We note that the government has been working closely with remaining TPP partners to conclude a new free-trade agreement. We encourage it to also double down on its efforts to negotiate free-trade agreements with other major Asian economies like China, India, and Japan.

Increased international trade will require new and improved trade infrastructure, for example on the West Coast. We see the Canada Infrastructure Bank, discussed above, as a critical enabler of new transportation facilities.

Finally, with respect to job loss and dislocation, we do not believe that trade and inclusive growth are inconsistent. In fact, we believe that trade is necessary for sustainable economic growth for all income quintiles. However, Canadian workers need support and training to become resilient to natural evolutions in a trade-based economy. We believe Canada can be a model for a highly open, yet supportive economy, and take on this challenge in our latest set of recommendations, "Learning Nation: Equipping Canada's Workforce with Skills for the Future." ■

Department of Finance Canada | Ministère des Finances Canada

For Signature by / Information of À signer par / Pour l'information de	Minister of Finance
Prepared by (name/initials/division) Préparé par (nom/initiales/division)	Mitch Villeneuve MV
In consultation with (name/initials/branch(es)/division(s)) En consultation avec (nom/initiales/direction(s)/division(s))	

Approved by / Approuvé par

Director Directrice / Directeur	
Director General Directrice générale /Directeur général	Phil King
Associate Assistant Deputy Minister Sous-ministre adjoint Délégué	~~Alison McDermott~~
Assistant Deputy Minister Sous-ministre adjoint	Nick Leswick
Associate Deputy Minister & G7 Deputy for Canada Sous-ministre délégué et représentant du Canada au G7	Rob Stewart
Associate Deputy Minister Sous-ministre déléguée	
Deputy Minister Sous-ministre	Paul Rochon
Remarks Remarques:	

SUBJECT / OBJET:

December 1, 2017 meeting of the Advisory Council on Economic Growth

File no. No de dossier	Date
2017FIN465905	NOV 30 2017

Associate Deputy Minister & G7 Deputy for Canada **Sous-ministre délégué et représentant du Canada au G7**	**(Sign on behalf of DM)** **(Signer au nom du SM)**	☐
Associate Deputy Minister **Sous-ministre déléguée**	**(Sign on behalf of DM)** **(Signer au nom du SM)**	☐
Assistant Deputy Minister **Sous-ministre adjoint(e)**	**(Sign on behalf of DM)** **(Signer au nom du SM)**	☑ TM.

Department of Finance Canada | Ministère des Finances Canada

MEMORANDUM NOTE DE SERVICE

Security classification / Classification de sécurité: SECRET

Originator/Telephone number / Auteur/Numéro de téléphone: Jean Lamirande

Our file / Notre référence:

Your file / Votre référence: 2017FIN465652

Date: NOV 24 2017

<u>Memo to the Minister or Minister's Staff</u>

Min's Office .... Orig. + 6
DMO 4
Assoc. DM & G7 Deputy 1
EFP .... e-copy
C&C .... e-copy
LAW .... e-copy

TO / À: Minister of Finance

FROM / DE: Paul Rochon

s.69(1)(g) re: (d)
s.69(1)(g) re: (e)

SUBJECT / OBJET: **Budget 2018 – Departmental Overviews**

For information.

[redacted]

ADM: Nick Leswick (613-369-3346)
Director General: Brad Recker (613-369-5667)

Canada

Pages 100 to / à 145

are withheld pursuant to sections

sont retenues en vertu des articles

69(1)(g) re: (d), 69(1)(g) re: (e)

of the Access to Information Act

de la Loi sur l’accès à l’information

Department of Finance Canada | Ministère des Finances Canada

For Signature by / Information of À signer par / Pour l'information de Minister of Finance	
Prepared by (name/initials/division) Préparé par (nom/initiales/division) Jean Lamirande	
In consultation with (name/initials/branch(es)/division(s)) En consultation avec (nom/initiales/direction(s)/division(s))	
Approved by	Approuvé par
Director Directrice / Directeur	Thomas Larouche
Director General Directrice générale /Directeur général	Brad Recker
Associate Assistant Deputy Minister Sous-ministre adjoint Délégué	Alison McDermott
Assistant Deputy Minister Sous-ministre adjoint	Nick Leswick
Associate Deputy Minister & G7 Deputy for Canada Sous-ministre délégué et représentant du Canada au G7	Rob Stewart
Associate Deputy Minister Sous-ministre déléguée	
Deputy Minister Sous-ministre	Paul Rochon
Remarks Remarques:	
SUBJECT / OBJET: **Budget 2018 – Departmental Overviews**	
File no. No de dossier 2017FIN465652	Date NOV 24 2017

Approved by Nick Leswick

Approuvé par Nick Leswick

Associate Deputy Minister & G7 Deputy for Canada **Sous-ministre délégué et représentant du Canada au G7**	**(Sign on behalf of DM)** **(Signer au nom du SM)**	☐
Associate Deputy Minister **Sous-ministre déléguée**	**(Sign on behalf of DM)** **(Signer au nom du SM)**	☐
Assistant Deputy Minister **Sous-ministre adjoint(e)**	**(Sign on behalf of DM)** **(Signer au nom du SM)**	☐

Department of Finance Canada — Ministère des Finances Canada

MEMORANDUM — NOTE DE SERVICE

Security classification / Classification de sécurité: SECRET

Originator / Auteur: Mitch Villeneuve

Our file / Notre référence: [redacted]

Your file / Votre référence: 2017FIN464740

Date: NOV 10 2017

TO / À: Minister of Finance

Memo to the Minister or Minister's Staff

Min's Office.................. Orig. + 6
DMO.................................... 4
Assoc. DM & G7 Deputy 1
EFP................................ e-copy
C&C................................ e-copy
LAW................................ e-copy

FROM / DE: Paul Rochon

SUBJECT / OBJET: **Growth Council: Update and Direction on Next Steps**

For information and decision. [redacted]

Issue

This memo provides a summary and analysis on the latest draft of the Advisory Council on Economic Growth's upcoming third report, which the Council is scheduled to present to you during the afternoon of December 1st.

Attached as annexes are:

- Annex A – Draft of introduction chapter
- Annex B – Draft of business investment chapter
- Annex C – Tax Policy Branch analysis of specific tax ideas raised by the Council
- Annex D – Draft of skills chapter
- Annex E – Draft of implementation chapter

[redacted]

ADM: Nick Leswick (369-3346)
GD: Alison McDermott (369-4018)

Canada

s.16(2)(c)

s.21(1)(b)

3rd Report of the Advisory Council on Economic Growth

The Council is close to completing its 3rd report, which focuses on ways to boost business investment and facilitate greater reskilling. The recommendations are still being finalized, but the Council looks to be settling on broad themes [redacted]

Below is a summary and analysis of the draft of the report that was sent to Council members ahead of its recent November 3rd teleconference meeting. The chapters of the latest draft of the report are attached as annexes.

[redacted]

Introduction Chapter (Annex A)

The Council proposes to open with a reminder of its initial mandate and target to raise real median household income by $15,000, as well as a discussion of the global economic forces motivating the Council's recommendations, such as the quickening pace of technological change and population aging.

[redacted]

Chapter on Business Investment (Annex B)

The Council opens this chapter by noting that investment is one of the most important drivers of productivity, which has grown more slowly in Canada than the United States in recent decades. It also notes that the increasing pace of technological change makes business investment more important than ever.

To motivate the policy areas on which to focus, the report cites a recent survey of Canadian business leaders in which regulations and taxes were identified as the areas with the greatest room for improvement among the factors that have a significant impact on business investment decisions.

Regulation section

The report notes that Canada does well in international rankings of regulatory processes and governance, and proposes to build on these strengths by creating the world's leading regulatory system – [redacted]

s.21(1)(b)

[redacted]

Tax section

The Council notes that the global economy has changed considerably since the tax system was last comprehensively reviewed (with intellectual capital and innovation becoming relatively more important, and physical capital becoming relatively less important) and that competition for global investment dollars has never been fiercer, making it important to ensure that the tax system continues to enable success in the modern economy.

Therefore, the Council proposes a targeted review of Canada's tax regime, focused on investment and innovation. This recommendation would see a panel of tax policy experts (academics, economists, and private sector tax specialists) formed to engage in consultations and develop a series of targeted recommendations to modernize Canada's tax system so that it better drives innovation and investment. The overall objectives of the review would be to:

- Foster the development and adoption of innovation in Canada;
- Enshrine Canada's position as a global magnet for investment and talent; and
- Bring a customer experience lens to tax administration.

[redacted]

s.21(1)(a)

s.21(1)(b)

[redacted]

<u>SMEs section</u>

[redacted]

Therefore, the Council plans to recommend that the Government scale up existing advisory services for SMEs, such as BDC's Growth Driver program, which provides expert advice, professional resources, and leadership development for CEOs of successful mid-size companies seeking to achieve the next phase of growth.

[redacted]

s.21(1)(a)

s.21(1)(b)

[redacted]

Chapter on Skills (Annex D)

To address the gap in training to meet future skills needs, which has been assessed by the Council at approximately $15B in annual adult investments, the Council recommends that the government introduce a <u>National Employment Resilience Strategy</u> to transform the existing skills and training landscape – currently focused on addressing unemployment by matching workers with presently in-demand skills – to one that encourages lifelong upskilling/reskilling for all adult workers.

As part of the National Strategy, the Council makes two specific recommendations:

- Introduce a federally-managed <u>Canada Lifelong Learning Fund</u> to help reduce the financial barriers to continue training for adults by co-funding, with employers and individuals, investments in skills development for working adults. The Fund would be designed to co-fund employee training initiatives with large employers undergoing major technological or business model transformations; co-fund initiatives by SME consortia organized along sector/geographical lines; or provide partial grants or loans to working adults to enroll in skills development programs that allow them to pursue new professional opportunities. The Fund would be administered by a <u>new federal agency</u> charged with the management and administration of the Fund as well as coordinating with the Forum of Labour Market Ministers (FLMM).

- Undertake a <u>national reform of employment centres</u>, in partnership with the Forum of Labour Market Ministers to ensure that PTs, who manage employment centers, are engaged. Ideally this would result in common practices and performance standards, expand the role of employment centers to provide counselling and training to those looking to reskill and upskill, regardless of employment status, and ultimately link employment centers with the data/expertise provided by FutureSkills Lab. The Council also recommends that the employment centres build two national partners networks: one with large businesses and SMEs that have new job openings, and the other comprising education and training providers that offer programs for working-age adults. The FLMM would oversee the reform process, in consultation with stakeholders.

s.21(1)(a)

s.21(1)(b)

[redacted]

s.14

s.21(1)(a)

s.21(1)(b)

Chapter on the Implementation of Previous Recommendations (Annex E)

The report will end with a chapter on the implementation of measures related to Growth Council recommendations, [redacted]

<u>December 1st Meeting</u>

The Council is scheduled to present its new recommendations to you in Ottawa during the afternoon of December 1st.

[redacted]

s.21(1)(a)

s.21(1)(b)

Page 154

is withheld pursuant to sections

est retenue en vertu des articles

21(1)(a), 21(1)(b)

of the Access to Information Act

de la Loi sur l’accès à l’information

Pages 155 to / à 159

are withheld pursuant to sections

sont retenues en vertu des articles

21(1)(a), 21(1)(b)

of the Access to Information Act

de la Loi sur l’accès à l’information

Pages 160 to / à 236

are withheld pursuant to section

sont retenues en vertu de l'article

21(1)(b)

of the Access to Information Act

de la Loi sur l’accès à l’information

(FOLD HERE) (PLIER ICI)

Department of Finance Canada | Ministère des Finances Canada

For Signature by / Information of À signer par / Pour l'information de Minister of Finance	
Prepared by (name/initials/division) Préparé par (nom/initiales/division) Mitch Villeneuve MV	
In consultation with (name/initials/branch(es)/division(s)) En consultation avec (nom/initiales/direction(s)/division(s))	
Approved by Approuvé par	
Director Directeur	Phil King
General director Directeur général	Alison McDermott
Assistant Deputy Minister Sous-ministre adjoint	Nick Leswick NL
Associate Deputy Minister & G7 Deputy for Canada Sous-ministre délégué et représentant du Canada au G7	Rob Stewart
Associate Deputy Minister Sous-ministre délégué	
Deputy Minister Sous-ministre	Paul Rochon
Remarks Remarques: **Growth Council: Update and Direction on Next Steps**	
File no. No de dossier 2017FIN464740	Date NOV 08 2017

Associate Deputy Minister & G7 Deputy for Canada **Sous-ministre délégué et représentant du Canada au G7**	**(Sign on behalf of DM)** **(Signer au nom du SM)**	☐
Associate Deputy Minister **Sous-ministre déléguée**	**(Sign on behalf of DM)** **(Signer au nom du SM)**	☐
Assistant Deputy Minister **Sous-ministre adjoint(e)**	**(Sign on behalf of DM)** **(Signer au nom du SM)**	☐

Department of Finance Canada

Memo to the Minister or Minister's Staff

Min's Office	Orig. + 7
DMO	4
Assoc. DM & G7 Deputy	1
EFP	e-copy
C&C	e-copy
LAW	e-copy

MEMORANDUM NOTE DE SERVICE

Security classification Classification de sécurité

SECRET

Originator Auteur

Jennifer Simms

Our file Notre référence

[redacted]

Your file Votre référence

2017FIN461210

Date

NOV 02 2017

TO / À: Minister of Finance

FROM / DE: Paul Rochon

SUBJECT / OBJET: **Next Steps for the National Housing Strategy**

For information.

Issue

[redacted]

Background

Budget 2017 announced a new NHS, providing more than $11.2 billion over 11 years for a range of initiatives designed to build, renew and repair Canada's stock of affordable housing (see Annex A – NHS measures). [redacted]

Additional Components of the National Housing Strategy

[redacted]

ADM: Michelle Kovacevic (613) 369-9572
Director: Roger Charland (613) 369-3887

Canada

s.16(2)(c)

s.21(1)(a)

s.69(1)(g) re: (a)

s.69(1)(g) re: (c)

s.69(1)(g) re: (d)

s.69(1)(g) re: (e)

Page 239

is withheld pursuant to sections

est retenue en vertu des articles

69(1)(g) re: (a), 69(1)(g) re: (c)

of the Access to Information Act

de la Loi sur l’accès à l’information

Considerations

[redacted]

[redacted]

As part of federal consultations on the development of a National Housing Strategy, CMHC has indicated that there was broad support that low-income households may benefit from demand-side measures, such as portable housing allowances, that permit more options and flexibility to take advantage of employment, educational and other life enhancing opportunities. It is expected that Indigenous Peoples, municipalities, the National Housing Collaborative, the Canadian Housing and Renewal Association, Front d'action populaire en réaménagement, the Co-operative Housing Foundation would support a Canada Housing Benefit. [redacted]

[redacted]

The current Investment in Affordable Housing federal initiative partly funds jurisdictions to provide needs-based social income support programs and measures, including monthly shelter allowances geared to the needs of their local housing markets. All PTs have housing allowance programs except Newfoundland, Northwest Territories and Nunavut. Moreover, there are jurisdictions with targeted portable housing programs already, for example, British Columbia has a Shelter Aid for Elderly Renters providing monthly cash payments to subsidize rents for eligible residents age 60 or over.

s.14(a)

s.21(1)(a)

s.69(1)(g) re: (a)

s.69(1)(g) re: (d)

s.69(1)(g) re: (e)

Page 241

is withheld pursuant to section

est retenue en vertu de l'article

69(1)(g) re: (a)

of the Access to Information Act

de la Loi sur l’accès à l’information

[redacted]

Next Steps

[redacted]

The launch of the Government's NHS is anticipated in time for National Housing Day taking place on November 22. We understand that CMHC is planning to release a public policy document for this date.

[redacted]

s.21(1)(a)

s.69(1)(g) re: (a)

s.69(1)(g) re: (c)

Annex A

NATIONAL HOUSING STRATEGY MEASURES

Total NHS funding committed in Budget 2017 was more than $11.2 billion over 11 years.

- $2.1 billion for renewed and expanded federal investments to combat and prevent homelessness through the Homelessness Partnering Strategy.
- $3.2 billion for a renewed partnership between the Government and provinces and territories to better support key housing priorities.
- $5 billion for a National Housing Fund to address critical housing issues, and better support vulnerable citizens. This will include funds for a range of measures to promote housing partnerships and innovation in the housing sector, direct lending for new rental housing supply and renewal, and to preserve the affordability of social housing.
- $300 million in targeted support for northern housing.
- $225 million in targeted housing support for Indigenous Peoples not living on-reserve.
- $202 million to make more federal lands available for the development of affordable housing.
- $241 million in expanded funding to strengthen CMHC's housing research activities.

Page 244

is withheld pursuant to sections

est retenue en vertu des articles

69(1)(g) re: (d), 69(1)(g) re: (e)

of the Access to Information Act

de la Loi sur l’accès à l’information

Pages 245 to / à 252

are withheld pursuant to section

sont retenues en vertu de l'article

69(1)(g) re: (a)

of the Access to Information Act

de la Loi sur l’accès à l’information

(FOLD HERE) (PLIER ICI)

Department of Finance Canada | Ministère des Finances Canada

For Signature by / Information of À signer par / Pour l'information de Minister of Finance	
Prepared by (name/initials/division) Préparé par (nom/initiales/division) Jennifer Simms	
In consultation with (name/initials/branch(es)/division(s)) En consultation avec (nom/initiales/direction(s)/division(s)) Andrea Howard David Le Drew (FSP) DLD	
Approved by Approuvé par	
Director Directeur	AC RC
Director Directeur	Roger Charland
General director Directeur général	Glenn Purves
Assistant Deputy Minister Sous-ministre adjointe.	Michelle Kovacevic AK
Associate Deputy Minister & G7 Deputy for Canada Sous-ministre délégué et représentant du Canada au G7	Rob Stewart
Associate Deputy Minister Sous-ministre déléguée	
Deputy Minister Sous-ministre	Paul Rochon
Remarks Remarques:	
File no. No de dossier 2017FIN461210	Date OCT 16 2017

Associate Deputy Minister & G7 Deputy for Canada **Sous-ministre délégué et représentant du Canada au G7**	**(Sign on behalf of DM)** **(Signer au nom du SM)**	☐ C.J.
Associate Deputy Minister **Sous-ministre déléguée**	**(Sign on behalf of DM)** **(Signer au nom du SM)**	☐
Assistant Deputy Minister **Sous-ministre adjoint(e)**	**(Sign on behalf of DM)** **(Signer au nom du SM)**	☐